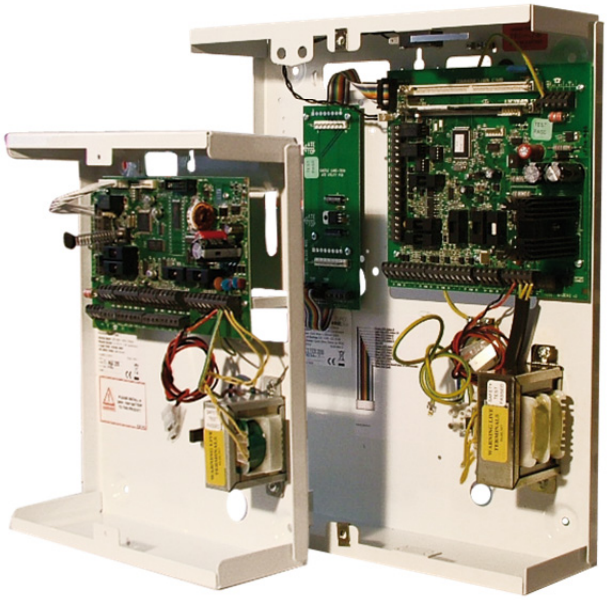
The EURO System Manual

EN50131-3:2009
EN50131-1:2006+A1:2009
PD6662:2010
Security Grade 2
Environmental Class 2

EN50131-3:2009
EN50131-1:2006+A1:2009
PD6662:2010
Security Grade 3
Environmental Class 2



For use with EURO 46, 76, MSX 162, MSX 280 software: **Version 9.1 or above**

For **Technical Assistance** please call our support team on **0845 6434 999** (local rate) **or 01709 535225** or visit **www.castle-caretech.com/technical**

When calling Technical Support, please have ready your **software version number**. This will enable the correct advice to be given for your panel and can be found in the engineer menu under software revisions.

RINS1572-1

CE

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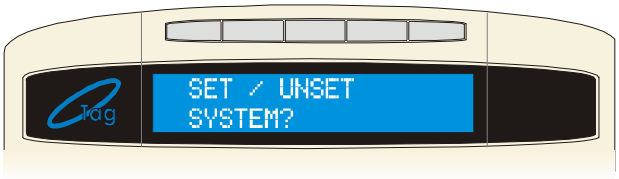
CHAPTER 1: THE ENGINEERS MENU

In order to program system configurations from the keypad, you must be in the Engineer Menu. The panel will enter the Engineering Menu after entering a valid engineer code when the panel is in an unset state. Whilst in Engineer Mode all tamper alarms (including case tamper), will be disabled.

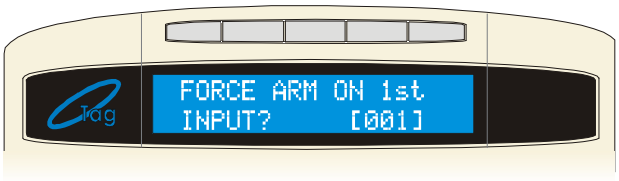
1.1 Entering The Engineers Menu

NOTE: You will not be able to access Engineers Mode if Areas or Set levels are set. The system must be fully unset in order to gain access to the Engineer Menu. Access maybe also denied if the user has disabled the "Allow Engineer Menu" in the Master Manager Mode 'Authorisation Required' will be shown.

- Enter Engineer Code (default 1111).
- Any active faults will be shown. Press the [NO] key.
- "**SET / UNSET SYSTEM**?" will be displayed.
- Press the [NO] key.



- "**FORCE ARM ON 1st INPUT [01]**" will be displayed.
- Press the [NO] key.



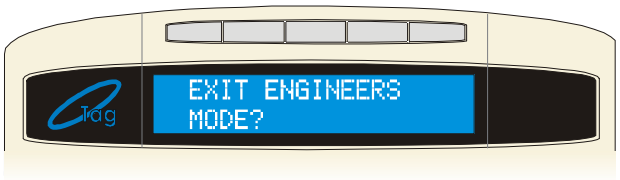
Once you are in the Engineer Menu, a high pitch tone will be generated regularly to remind you that you are still in the Engineer Menu.

1.2 Exiting The Engineer Menu

On completion of programming, the system can be returned back to normal mode by:

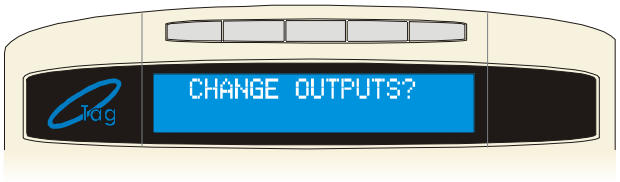
METHOD ONE

- Use the scroll keys: [B] and [NO] to scroll to "**EXIT ENGINEERS MODE**"
- Press the [YES] key.
- You will be returned to day mode



METHOD TWO

- When the display shows any main menu item (i.e. an item shown in capitals) press the [A] key, you will be returned to day mode.



Please see page: 136 for all fault codes that may appear when exiting Engineers.

CHAPTER 2: SYSTEM OVERVIEW

2.1 General Overview

EURO	46 DP	46 EOL	76 iD	76 EOL	162 iD	162 EOL	280 iD	280 EOL
Inputs (max)	28		76		162		280	
Inputs (max iD)	10		60		150		240	
Inputs (max wireless inputs) Using EURO-ZEM32-WE	32 (1 x ZEM32-WE)		32 (1 x ZEM32-WE)		64 (2 x ZEM32-WE)		96 (3 x ZEM32-WE)	
Inputs (max wired ZEMs) EURO-ZEM8+	4	4	1	7	4	18	7	30
Set Points (Max) $	6		8		16		30	
Of which max keypads	6		8		16		30	
Other Devices Max $	5		7		15		29	
Wireless Bells	2		2		2		2	
Level Sets	6		8		12		14	
Full Areas	6		8		12		14	
Wards (Max)	5		7		15		29	
Shunts	23		38		81		140	
Wireless Keyfobs	32		32		32		32	
User / Manager Codes £	75		100		200		500	
Duress / Guard Codes	10		20		20		20	
Logs Mandatory	750		1000		1000		1000	
Logs Access	250		500		500		500	
Logs Optional	250		500		500		600	
Output Modules	2		4		8		16	
EN Grade	3 (2 = Small casing)		3		3		3	
Environment Class	2		2		2		2	
Comms	Modem, ATE Pins, ARM®		Modem, ATE Pins, ARM®		Modem, ATE Pins, ARM®		Modem, ATE Pins, ARM®	
Modem Type	Digi-1200/Digi-GSM		EUR-073-ARM		EUR-073-ARM		EUR-073-ARM	
MSX card compatible	×		✓		✓		✓	
Autoset & Gates	✓		✓		✓		✓	
Shunt, Day Alarm, Unset Input Types	✓		✓		✓		✓	
Follow Input	✓		✓		✓		✓	
Special Log	✓		✓		✓		✓	
Intelligent Inputs	Multiple		Multiple		Multiple		Multiple	
Inputs to Confirm on Entry	1 or 2		1 or 2		1 or 2		1 or 2	
Display when Set	✓		✓		✓		✓	
Selectable Resistance Ranges	✓		✓		✓		✓	
Download When Set	✓		✓		✓		✓	
Remote Set and Soak	✓		✓		✓		✓	
Event Signalling to Insite	✓		✓		✓		✓	
Dial Out Menu	Upload/ Commission		Upload/ Commission		Upload/ Commission		Upload/ Commission	

Power Supply		EURO 46 (1.5A small casing, 2A large casing) EURO 76 (2.5A. Rating Grade 1: 2.25A 2: 1.4A 3: 0.9A)
£		Plus engineer and master manager codes
$		Includes keypads, tag readers, and TMZs

**EURO 46 supports both double end of line and double pole wiring*

2.2 Input Mappings (End of Line / Double Pole/iD)

EURO	*46 EOL/DP	76 iD	76 EOL	162iD	162EOL	280iD	280EOL
iD							
End Station	-	1-30	-	1-30	-	1-30	-
ZEM 0	-	31-60	-	31-60	-	31-60	-
ZEM 1	-	-	-	61-90	-	61-90	-
ZEM 2	-	-	-	91-120	-	91-120	-
ZEM 3	-	-	-	121-150	-	121-150	-
ZEM 4	-	-	-	-	-	151-180	-
ZEM 5	-	-	-	-	-	181-210	-
ZEM 5	-	-	-	-	-	181-210	-
ZEM 6	-	-	-	-	-	211-240	-
EOL							
End Station	1-8	61-68	1-8	151-158	1-8	241-248	1-8
ZEM0	9-16	-	9-16	-	9-16	-	9-16
ZEM1	17-24	-	17-24	-	17-24	-	17-24
ZEM2	25-32	-	25-32	-	25-32	-	25-32
ZEM3	33-40	-	33-40	-	33-40	-	33-40
ZEM4	-	-	41-48	-	41-48	-	41-48
ZEM5	-	-	49-56	-	49-56	-	49-56
ZEM6	-	-	57-64	-	57-64	-	57-64
ZEM7	-	-	-	-	65-72	-	65-72
ZEM8	-	-	-	-	73-80	-	73-80
ZEM9	-	-	-	-	81-88	-	81-88
ZEM10	-	-	-	-	89-96	-	89-96
ZEM11	-	-	-	-	97-104	-	97-104
ZEM12	-	-	-	-	105-112	-	105-112
ZEM13	-	-	-	-	113-120	-	113-120
ZEM14	-	-	-	-	121-128	-	121-128
ZEM15	-	-	-	-	129-136	-	129-136
ZEM16	-	-	-	-	137-144	-	137-144
ZEM17	-	-	-	-	145-152	-	145-152
ZEM18	-	-	-	-	-	-	153-160
ZEM19	-	-	-	-	-	-	161-168
ZEM20	-	-	-	-	-	-	169-176
ZEM21	-	-	-	-	-	-	177-184
ZEM22	-	-	-	-	-	-	185-192
ZEM23	-	-	-	-	-	-	193-200
ZEM24	-	-	-	-	-	-	201-208
ZEM25	-	-	-	-	-	-	209-216
ZEM26	-	-	-	-	-	-	217-224
ZEM27	-	-	-	-	-	-	225-232
ZEM28	-	-	-	-	-	-	233-240
ZEM29	-	-	-	-	-	-	241-248
RKP0	41-42**	69-70	65-66	159-160	153-154	249-250	249-250
READ/RKP1	43-44**	71-72	67-68	161-162	155-156	251-252	251-252
READ/RKP2	45-46**	73-74	69-70	-	157-158	253-254	253-254
READ/RKP3	-	75-76	71-72	-	159-160	255-256	255-256
READ/RKP4	-	-	73-74	-	161-162	257-258	257-258
READ/RKP5	-	-	75-76	-	-	259-260	259-260
READ/RKP6	-	-	-	-	-	261-262	261-262
READ/RKP7	-	-	-	-	-	263-264	263-264
READ/RKP8	-	-	-	-	-	265-266	265-266
READ/RKP9	-	-	-	-	-	267-268	267-268
READ/RKP10	-	-	-	-	-	269-270	269-270
READ/RKP11	-	-	-	-	-	271-272	271-272
READ/RKP12	-	-	-	-	-	273-274	273-274
READ/RKP13	-	-	-	-	-	275-276	275-276
READ/RKP14	-	-	-	-	-	277-278	277-278
READ/RKP15	-	-	-	-	-	279-280	279-280

READ = Reader, RKP = Remote Keypad
**EURO 46 supports both double end of line and double pole wiring at endstation*
ZEMs can also support double end of line and double pole
***Supports only double end of line wiring (not double pole)*

2.3 Input Mappings (Wireless)

EURO	46 Wireless	76 Wireless	162 Wireless	280 Wireless
End Station	-	-	-	-
ZEM0	9-16	9-16	9-16	9-16
ZEM1	17-24	17-24	17-24	17-24
ZEM2	25-32	25-32	25-32	25-32
ZEM3	33-40	33-40	33-40	33-40
ZEM4	-	-	41-48	41-48
ZEM5	-	-	49-56	49-56
ZEM6	-	-	57-64	57-64
ZEM7	-	-	65-72	65-72
ZEM8	-	-	-	73-80
ZEM9	-	-	-	81-88
ZEM10	-	-	-	89-96
ZEM11	-	-	-	97-104
ZEM12	-	-	-	-
ZEM13	-	-	-	-
ZEM14	-	-	-	-
ZEM15	-	-	-	-
ZEM16	-	-	-	-
ZEM17	-	-	-	-
ZEM18	-	-	-	-
ZEM19	-	-	-	-
ZEM20	-	-	-	-
ZEM21	-	-	-	-
ZEM22	-	-	-	-
ZEM23	-	-	-	-
ZEM24	-	-	-	-
ZEM25	-	-	-	-
ZEM26	-	-	-	-
ZEM27	-	-	-	-
ZEM28	-	-	-	-
ZEM29	-	-	-	-

Wireless ZEMs (EURO-ZEM32-WE)

The first Wireless ZEM can have 32 Wireless Inputs, 32 Wireless Keyfobs and 2 Wireless Bells learnt to it. Every Wireless ZEM after the first may only have Wireless Inputs learnt. See the table above for the maximum number of wireless ZEMs available for the system. Each Wireless ZEM is programmed as 4 different ZEMs in the programming menu, and they each have 8 Wireless Inputs assigned.

Wireless ZEMs (EUR-037R)

The Inovonics wireless ZEM is added to the syustem as if it was a wired ZEM and follows the same zone mapping as the table on the previous page.

CHAPTER 3: KEYPAD AND READER INDICATIONS

The EURO panel is active for 24 hours a day and the two basic operation modes are unset mode and set mode.

UNSET: In this mode all inputs are unset, apart from Fire, Hold Up, 24 Hour, Gas, Tamper and Fault, which are active 24 hours a day. The Tamper state of all End of Line inputs is always active irrespective of the input type.

SET: In this mode all enabled inputs are set, and if triggered will generate an alarm condition. If an alarm is triggered, internal and external sounders will operate for a programmed period or time. Upon expiry of this time period, the system will automatically rearm subject to programming.

There are 3 types of operating devices for the EURO: The LCD keypad, the internal proximity reader and the external proximity reader. Also note that the EURO LCD keypad also has an inbuilt prox reader.

3.1 The Contemporary Keypad

ALERT ALARM TAMPER FAULT UNSET

The Contemporary Keypad's LEDs are used as warning indications, and are described below:

ALERT LED (orange)

The Alert LED will flash if there is information available to you. Enter your code to see the information. After a code has been entered, one of the following LEDs will light: Tamper or Fault. The relevant detail of the problem will be shown on the display. To clear the display, press the 'Yes' key (the display will clear automatically after 3 minutes).

ALARM LED (red)

This indicates that an alarm activation has occurred.

TAMPER LED (red)

This indicates that a tamper has occurred (only visible when a valid code / tag has been used)

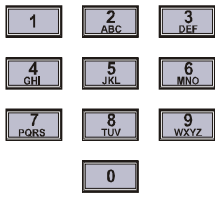
FAULT LED (orange)

This indicates that a fault has occurred, i.e. device fail etc.

(only visible when a valid code / tag has been used)

UNSET LED (green)

This will illuminate for a couple of seconds after the system has been unset and will also illuminate for the duration of the setting procedure.

NUMERICAL BUTTONS Used to enter user codes and program input names	
OPERATIONAL BUTTON 1. The YES Key Selects items and enters sub menu indicated in master manager menu. Used to set the panel if flexi-set is enabled.	
OPERATIONAL BUTTON 2. The NO Key Moves forward to the next main menu item, also clears faults.	
THE A KEY Exit Manager Mode (from a main menu item)	
THE B KEY Moves backwards to the previous menu item	
THE C KEY Chime Button and displays additional information in the log and the diagnostic functions.	
THE D KEY Moves forward to the next option, or toggles between 'YES/NO' choices. Enters the manager mode.	

The emergency buttons for the EURO system consist of 2 buttons being pressed simultaneously to activate a Hold Up. These are the keys [1] and [7]. On default these are disabled to comply with ACPO policy (Not PD6662). If you wish for these to be enabled please see the function '2 Key HU' in 'Site Options' in the engineers menu.

3.1.1 Code Guessing

When the EURO panel is set, an intruder may try to 'guess' the user code to unset the system, so the EURO panel incorporates a feature that stops this; if 30 or more invalid key presses are input, or 6 invalid tags are presented at the keypad, the keypad will disable for 90 seconds. It will then subsequently disable after 7 further invalid key presses or another invalid tag is presented.

After the disabled time has timed out, a valid user code/tag may be presented and the system will unset. 'Code Guessing' will be visible on the keypad. To clear this, press the [NO] key.

The system does become active after a valid code/tag has been entered to silence an alarm activation at any other active device.

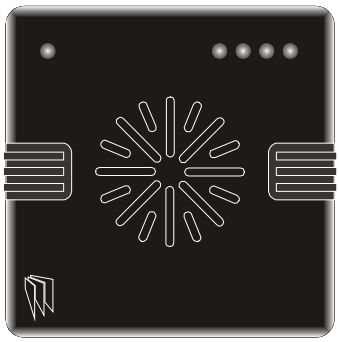
3.2 The Internal Tag Reader

The internal tag reader uses prox tags (as shown below) and prox cards.

ALERT LED The Alert LED will flash if there is information available to you. Enter your code to see the information on the Keypad. After a code has been entered, one of the following LEDs will light: Tamper or Fault. The relevant detail of the problem will be shown on the display. To clear the display, press the 'Yes' key or present your tag.	
ALARM LED This indicates when an alarm activation as occurred.	
TAMPER LED This indicates when a tamper has occurred.	
FAULT LED This indicates when a fault has occurred, i.e. device fail etc.	
UNSET LED This will illuminate for a couple of seconds after the system has been unset. This symbol also illuminates during the setting procedure.	

3.3 The External Prox Reader

The internal tag reader uses prox tags (as shown below) and prox cards.

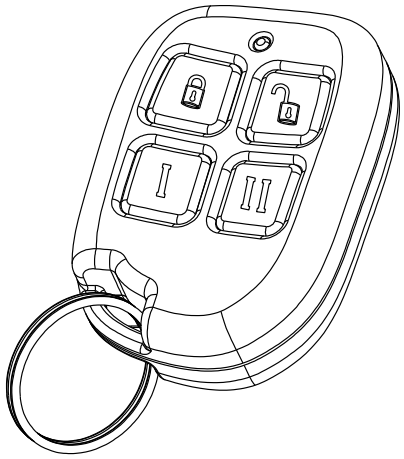


GREEN LED This indicated that the reader is ready to accept a tag. This will extinguish after a couple of seconds.	
RED LED This can be programmed to follow an output (For example you may want the output to illuminate when an Area is set). See programming outputs in the programming manual.	

3.4 The Enforcer Wireless Keyfob

If a wireless expander is installed (EURO-ZEM32-WE) on the Euro system, up to 32 keyfobs can be enabled.

LED indications	Colours	LED
System unset	GREEN	
System set	RED	
Setting	RED (Pulsing)	
Keyfob not learnt	GREEN/RED (alternate)	
Unable to set (fault)	AMBER	



3.4.1 Programmable Action Buttons

In order to program any keyfob buttons, the keyfob must first be learnt in the Master Manager menu (and assigned to a user).

[0] No action: Disables the button
[1] Show Status: If the keyfob is learnt, the LED will flicker when the nominated button is pressed. GREEN = Unset. RED = Set.
[2] Set Area: Sets the chosen area
[3] Unset Any Area: Unsets any area on the system
[4] Latch Output: Latches an output (programmable) when the nominated button is pressed.
[5] Timed Output: Activates an output for a period of time (programmable in seconds)
[6] Personal Attack Output: Activates a hold up alarm. Only programmable in the engineers menu.

CHAPTER 4: POWERING UP & KEYPAD OPERATIONS

Before using the system, all items connected to the RS-485 communications bus must be allocated a unique address.

4.1 Default Codes / Number of Areas/Level Sets

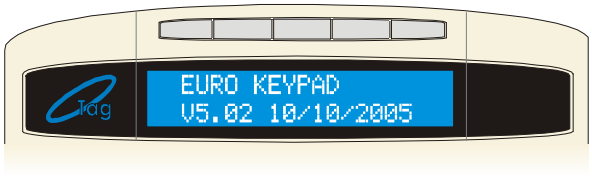
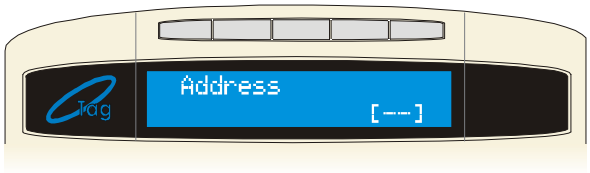
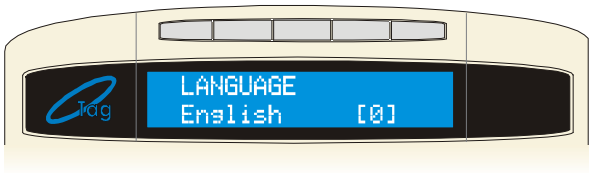
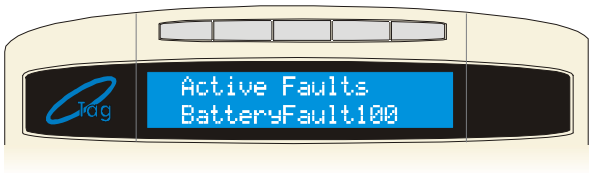
User: 1234.	**Master Manager:** 2222	**Engineers**: 1111

4.2 Number of Areas/Level Sets

EURO 46: 6 level sets/areas	**EURO 162:** 12 level sets/areas
EURO 76: 8 level sets/areas	**EURO 280:** 14 level sets/areas

4.3 Initial Power Up

Power up the EURO system on **mains only**, an alarm will be generated. Proceed to the nearest keypad, which will display (from power up):

➢ The following will be displayed:	
After 10 seconds, the display will blank, and then show 'Address'. Enter 00 and then press the YES key. (Press the YES key for further options such as tag volume, keypad brightness etc).	
Press the A key to exit the addressing function, and enter '1111' (default engineer code) to silence any alarms that occur.	
When the display shows: 'Battery Fault' and **NOT** before, connect the battery to the panel.	

In the keypad sub-menu there are also other individual options such as: language, the status of the keypad inputs, key-click volume, tag volume, master volume and the tag iD. The tag iD can be used to show the identification code for a proximity tag.

4.4 The Addressing Keypads Function

To address further keypads on the EURO system, press and hold the D key until "**KEYPAD CODE**" is displayed. Then enter '2000' as the code. This will take you to the screens above. Once this has been done you will need to assign the keypad in engineer's mode, see 'Assign Keypads/Readers' on page: 33. Note: To address the readers you must select the relevant switches on the circuit board, see the installation manual for more information.

Any keypad that is not properly assigned will have a blank display until it is addressed in the keypad sub-menu and enabled in the engineers menu.

4.5 Testing The Keypad

With the system unset, press the [B] key for 10 seconds at any keypad. This will cause all the LEDs on that keypad to illuminate, and the LCD screen to scroll a display testing each pixel. The keypad will revert to normal display approximately 10 seconds after the key is released.

4.6 Text Programming

Text may be programmed for input names/user codes, for the 'sign-on' message, and to identify the Set level being set / unset. Each keypad key is allocated characters as shown below:

The EURO system incorporates predictive text, so the system will predict what word is being spelt. For example, if you enter 'B' and press the [D] key and enter 'e', Bedroom will be displayed; to accept this press the [YES] key. If the word that you require doesn't appear on the LCD display, just type the word as normal, using the [D] key to move the cursor right.

To type a word, press the relevant key the appropriate number of times – e.g. for the letter 'k' press the [5] key twice, or for the letter 's' press the [7] key four times.

In addition, the [A] [B] [C] [D] keys are used as follows:

[A] = make the character into a capital
[B] = move cursor left
[C] = clears cursor / adds a space
[D] = moves cursor right

4.7 Accessing the Engineers Menu on any Keypad

It is possible to access the Engineer Menu on any keypad. If you are in the Engineer menu in keypad address 0, the other keypads will display 'system busy', to access the Engineer menu on these, press the [B] key on the relevant keypad.

4.8 Grade 2 and Grade 3

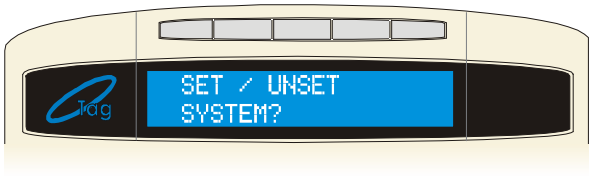
The EURO 46, 76, 162 and 280 can be used as either a Grade 2 panel, or a Grade 3 panel. This feature is performed in the 'Clean Start' option (see page 19) All you need to do is enter '2000' to clean start the panel to Grade 3. Or enter '2002' to clean start the panel to Grade 2. Alternatively if the msx card is taken out of a EURO panel, the base panel operates as a EURO 28 (Grade 2).

4.9 Set / Unset System

If you do not have access to a user code, setting and unsetting the system can be done using the engineer's code. The engineers code can only unset the system if the system was set with the engineers code.

Please note the term areas will refer to both areas and level sets in this manual, also note that the number of level sets/areas will change depending on the panel.

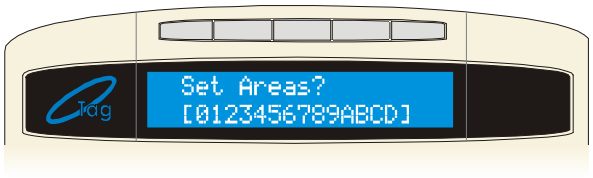
- Enter Engineer Code (default 1111).
- "**SET / UNSET SYSTEM**?" will be displayed
- Press the [YES] key



Select the Area(s) / level sets you would like to set. Press the [YES] key. The system then will begin to set.

To unset the areas, enter the engineer code, and wait a couple of seconds. '**SET / UNSET SYSTEM'** will be displayed, press the [YES] key.

To unset the areas, press the [NO] key.



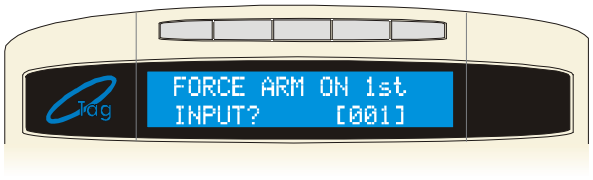
(This shows the display of a EURO 280 panel)

4.10 Forced Arm On Inputs

The 'Forced Arm On Inputs' allows the Engineer to set the system using the Engineer Code, forcing it to Set despite inputs in fault condition, and nominate which inputs must be triggered to generate an alarm condition. This is a useful feature if you need to test a system in a building where people are walking around. **NOTE 1: The system will give the correct DigiCom response to the Setting, and any resulting alarm.**

On unsetting the system (With the Engineer code or the User code), the system will revert to normal mode. **NOTE 2: If the system has been set by any other code, the Engineer code will not unset it.**

- Enter Engineer Code (default 1111).
- Any active faults will be displayed, press the [NO] key.
- Press the [NO] key again.
- '**FORCED ARM ON INPUT**' will be displayed
- Select the first input to be forced set and press the [YES] key.
- Select the second input to be forced set and press the [YES] key.



Select the area(s) / level set you would like to set. Press the [YES] key. The system then will begin to set. When the input is triggered the alarm will be activated. Please note the primary Areas are A,B,C and D.

(This shows the display of a EURO 280 panel)

CHAPTER 5: THE ENGINEER FUNCTIONS

Please note that any programming changes made in the Engineers Menu will not be seen by the system until you have exited and the system has saved its data (please see Page: 8).

5.1 Clean Start

It is essential that the Non-Volatile Memory (NVM) be reset at initial power up of a new system, to ensure that the initialisation is correct to factory defaults.

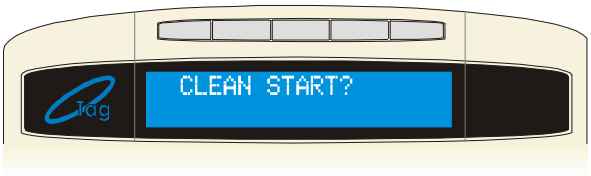
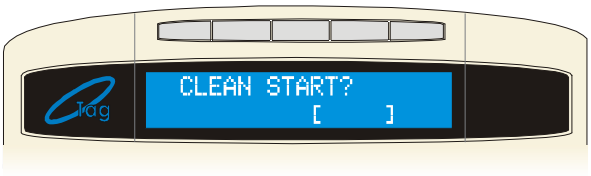
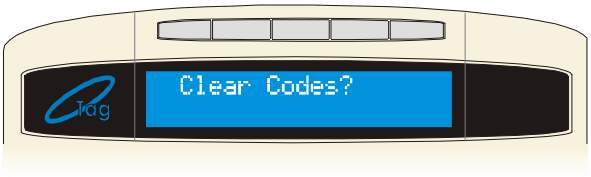
The 'CLEAN START' function will clear all information apart from the user codes and the logs. After the system has completed a reset, it will prompt with '**Clear Codes?**' If 'Yes' is selected then all user codes will be cleared. Once this has completed, the system will then prompt '**Clear Logs**'. If 'Yes' is selected, all the logs will be cleared. The process below describes how to do this.

If the NVM chip is removed from the panel, it MUST be replaced before starting programming.

The system memory will now be restored to factory defaults EXCEPT:

- Keypad 00 remains enabled at all times & the keypad in use remains enabled
- Current keypad Areas are not changed

NOTE: If a new NVM chip is to be used, logs should be cleared.

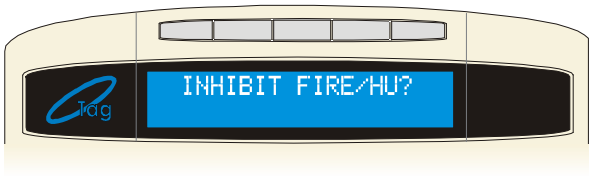
Using the [B] and [NO] keys, scroll to '**CLEAN START?**' Press the [YES] key.	
The following will be displayed: Enter [2][0][0][0] "**Please Wait**" will be displayed, and then 'Panel has been clean started'. ***(Enter 2002 for a Grade 2 default clean start)***	
Press the [YES] key. **"Clear Codes"** will be displayed". If you would like to clear all the codes then press the [YES] key now. "Codes have been cleared" will be displayed. Otherwise press the [NO] key. "**Clear Logs**" will be displayed. If you would like to clear the logs then press the [YES] key now. "Logs have been cleared" will be displayed. Otherwise press the [NO] key. You will be returned to the Engineer Menu.	

5.2 Inhibit Fire/HU

This function allows you to select if you would like the EURO system to respond to or inhibit **Fire** and **Hold Up** Alarms whilst using the Engineers Menu.

Using the [B] and [NO] keys, scroll to '**INHIBIT FIRE/HU?**'

Press the [YES] key



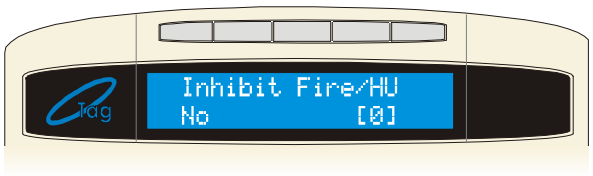
The following will be displayed:

Enter [0]: for [NO] **(Default)**

Enter [1]: for [YES]

Press the [YES] key

You will be returned to the Engineer Menu.

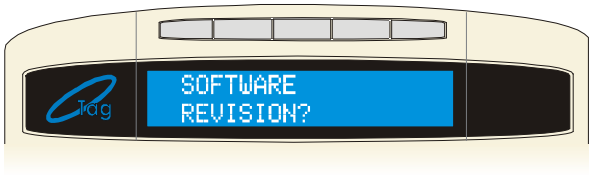


5.3 Software Revision

This option identifies the software version number, software serial number and product.

Using the [B] and [NO] keys, scroll to '**SOFTWARE REVISION?**'

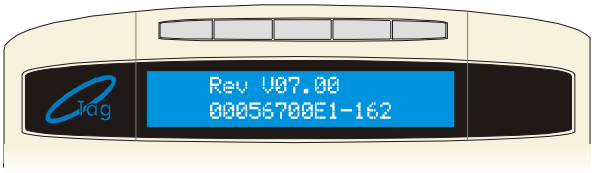
Press the [YES] key.



The version number will be displayed.

In this example, the panel is a EURO 162, version 7. Press the [YES] key.

You will be returned to the Engineer Menu.



5.4 Choose Mode

5.4.1 Detection Mode

The panel can be either operated as an End of Line panel or an iD panel. For more information about the input mappings please see page 10. ***EOL is selected as default.***

5.4.2 The End of Line Range*

This programs the panel to operate with different resistor values:

1K/1K = *Alarm: 1K, Tamper: 1K.* **4K7/2K2** = *Alarm: 4K7, Tamper: 2K2.* ***(Default)***

4K7/4K7 = *Alarm: 4K7, Tamper: 4K7.* **Wide** = Wide Range.

5.4.3 SR or DR

This programs whether the whole alarm panel and any ZEMs will be used in Singe End of Line mode (SR) or Double End of Line (DR) resistor mode. ***(DR is selected as default)***

5.4.4 Input Response Time

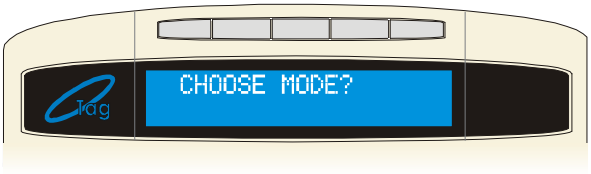
This selects the time that an input trigger must be present before the whole system responds by generating an alarm, and is programmable from 100mS (0.1 seconds) to 3000mS (3 seconds). *Note: Settings above 400mS do not comply with PD6662/EN50131. If used in a BS4737 installation, setting should be between 300 and 800mS.* ***400mS is selected as default.***

5.4.5 Input XDF

DO NOT CHANGE THIS SETTING UNLESS INSTRUCTED TO BY CUSTOMER SUPPORT.

Choose Mode

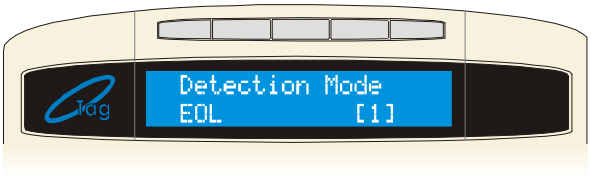
Using the [B] and [NO] keys, scroll to '**CHOOSE MODE?**'. Press the [YES] key



Detection Mode

Enter [0]: iD. Enter [1]: EOL

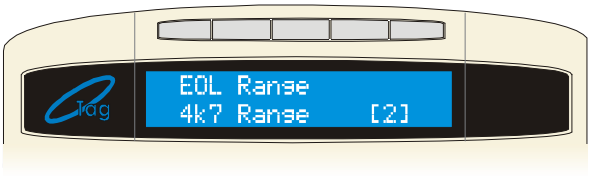
Press the [YES] key



The End of Line Range

Enter [0]: 1k. Enter [1]: 2k2

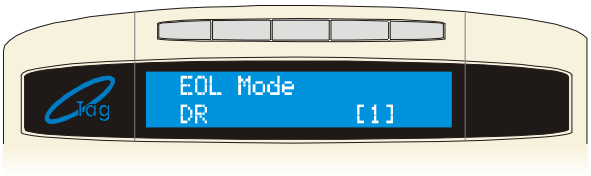
Enter [2]: 4k7. Press the [YES] key



The End of Line Mode

Enter [0]: for **SR** Enter [1]: for **DR**

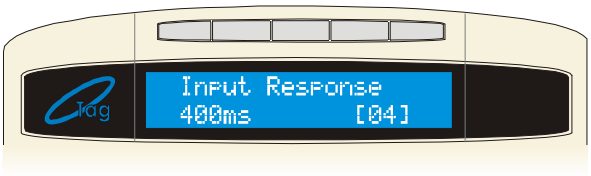
Press the [YES] key



The Input Response

Select the required input response – using the [B] and [D] keys to scroll through the different responses: 100ms to 3000ms.

This should be left at default (400ms). Press [YES]. ***Input XDF*** will be displayed, do not alter this and press the [YES] key

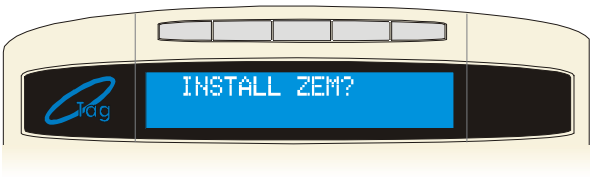


5.5 Install ZEMs

Any Zone Expander Modules (ZEMs) installed on the EURO system must be enabled by the 'Install ZEM' function.

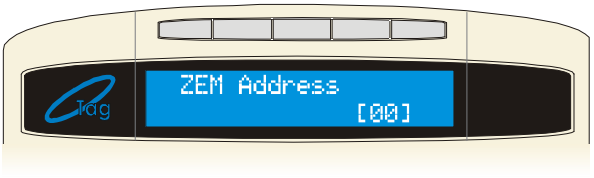
Install ZEM

Using the [B] and [NO] keys, scroll to '**INSTALL ZEM?**'. Press the [YES] key



ZEM Address

Please select the address for the ZEM you are installing and press the [YES] key.



ZEM Installed?

Enable/Disable the ZEM that you have installed.

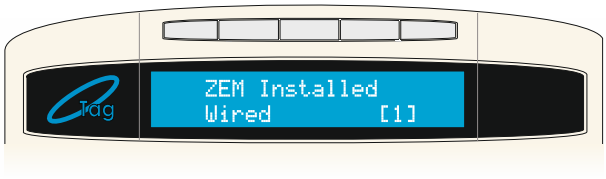
Enter [0]: for **No**

Enter [1]: for **Wired /EURO-037R**

Enter [1]: for **Wireless/EURO-ZEM32-WE**

Press the [YES] key. Repeat for additional ZEMs or press the [NO] key. You will be returned to the Engineer Menu.

For information on how to use predictive text, please see page:17. Enter the location and press [YES]



5.5.1 Wireless ZEMs

The first Wireless ZEM can have 32 Wireless Inputs, 32 Wireless Keyfobs and 2 Wireless Bells learnt to it. Every Wireless ZEM after the first may only have Wireless Inputs learnt. A maximum of 3 Wireless ZEMs may be programmed onto the EURO system. Each Wireless ZEM is programmed as 4 different ZEMs in the programming menu, and they each have 8 Wireless Inputs assigned. Here is an example of how 2 Wireless ZEMs, fully loaded, can operate on the EURO system:

Wireless ZEM 1. Address: 0-3:

Total Wireless Inputs: 32 (***Address 0*** = 8 Wireless Inputs (1-8), ***Address 1*** = 8 Wireless Inputs (9-16), ***Address 2*** = 8 Wireless Inputs (17-24) and ***Address 3*** = 8 Wireless Inputs (25-32))

Total Wireless Keyfobs: 32 **Total Wireless Bells:** 2

Wireless ZEM 2. Address: 4-7:

Total Wireless Inputs: 32 (***Address 0*** = 8 Wireless Inputs (32-40), ***Address 1*** = 8 Wireless Inputs (41-48), ***Address 2*** = 8 Wireless Inputs (49-57) and ***Address 3*** = 8 Wireless Inputs (58-64)). ired ZEMs and Wireless ZEMs can be installed together on a system and as long as they are addressed uniquely, they will work alongside each other.

For example, if you wish to use 24 wireless inputs and 8 wired inputs, you can address the Wireless ZEM as ZEM 0,1 and 2 in the programming function 'Install ZEM' and learn 24 inputs to the system using the 'Wireless Device Control' menu. Then address a wired ZEM as ZEM 3.

5.6 Wireless Device Control (EURO-ZEM32-WE)

5.6.1 Wireless ZEMs (EURO-ZEM32-WE)

If a EURO-ZEM32-WE Enforcer wireless ZEM is installed on the Euro panel, the learning (and deleting) procedure for the wireless inputs and bells are performed in this function. It is recommended that all wireless devices are learnt at the wireless expander before any installation /mounting is done. This is so the signal strength (In Diagnostics, see page:61) can be tested afterwards in order to check the location of the wireless device is acceptable.

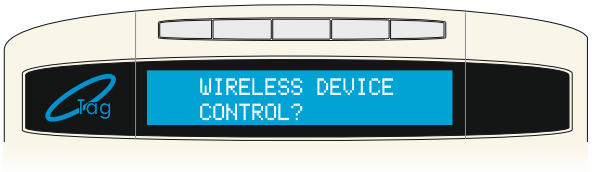
5.6.2 Programming Keyfob Buttons

In order for the engineer to program any keyfob buttons, the keyfob must first be learnt in the Master Manager menu (and assigned to a user).

[0] No action: Disables the button
[1] Show Status: If the keyfob is learnt, the LED will flicker when the nominated button is pressed. GREEN = Unset. RED = Set.
[2] Set Area: Sets the chosen area
[3] Unset Any Area: Unsets any area on the system
[4] Latch Output: Latches an output (programmable) when the nominated button is pressed.
[5] Timed Output: Activates an output for a period of time (programmable in seconds)
[6] Panic Attack Output: Activates a hold up output (programmed in Engineers only)

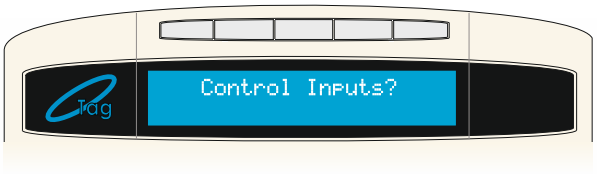
Wireless Device Control

Using the [B] and [NO] keys, scroll to '**WIRELESS DEVICE CONTROL?**'. Press the [YES] key



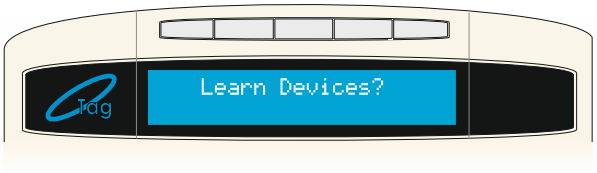
Control Inputs

To learn/delete inputs, press the [YES] key, or press [NO] to learn/delete bells.



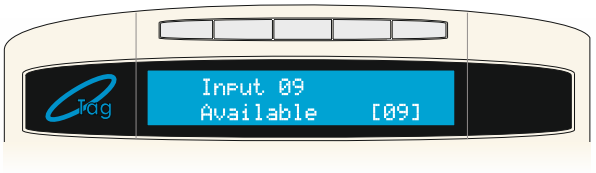
Learn Devices

To learn a new wireless device to the wireless ZEM, press the [YES] key. Press the [NO] key to delete inputs.

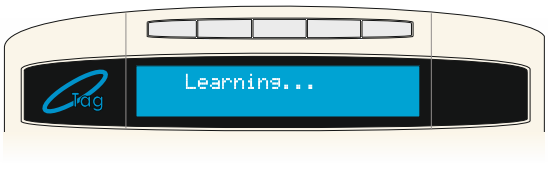


Available/Learnt

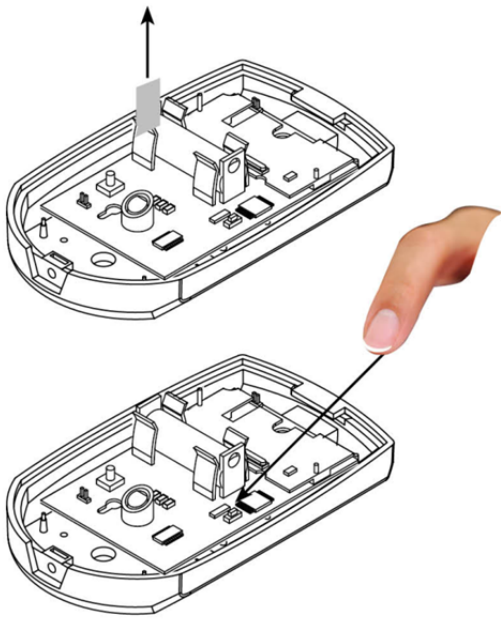
Use the [B] and [D] keys to select the relevant input that is to be learnt and press the [YES] key.

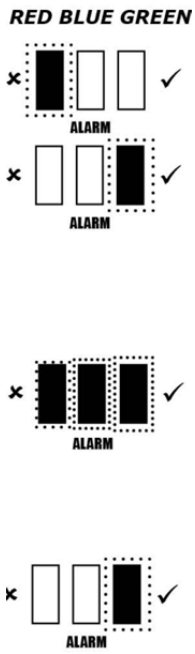


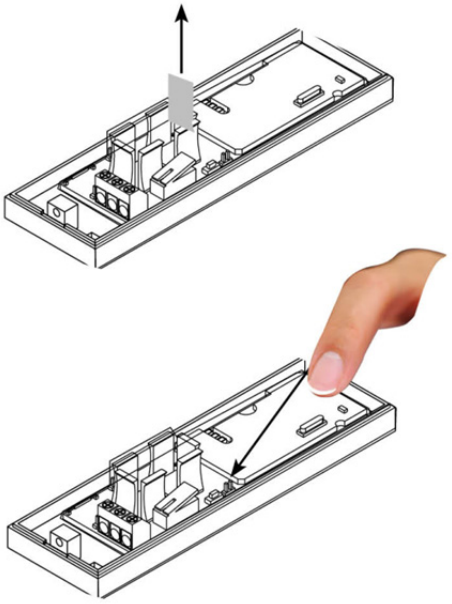
Learning...



The following shows how to learn a wireless detector or a magnetic contact. During the learning process the 'LEARN' button must be held until the GREEN LED on the device flashes and the keypad display shows 'Input Learnt'. Please note if smoke or carbon monoxide sensors are being learnt, they will just include one learn button and one LED.

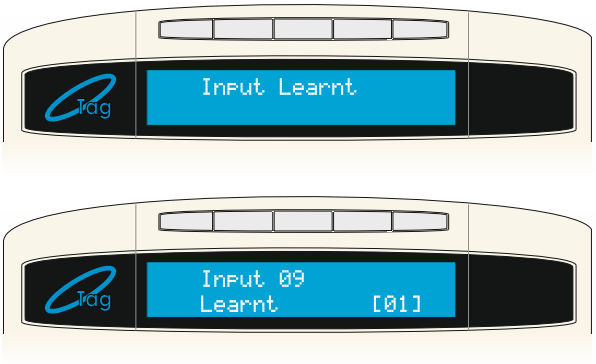






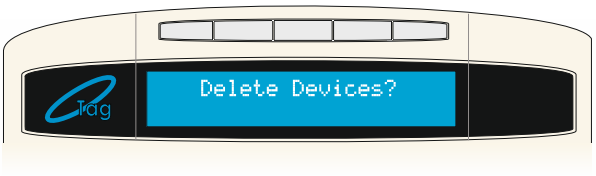
If the **GREEN LED** on the wireless device and the display shows 'Input Learnt' the device has been learnt successfully.

Press the YES key.



Delete Devices

To delete inputs, press the YES key, or press NO to learn/delete bells.

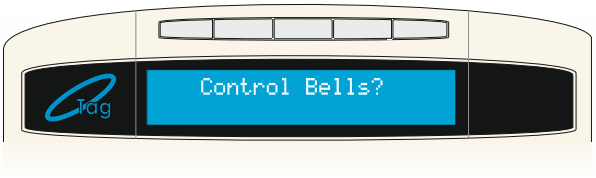


Delete All

Inputs can either be deleted individually or all at once. To delete all wireless devices press the YES key (the code 2000 will need to be entered). Or press the NO key to delete individually.

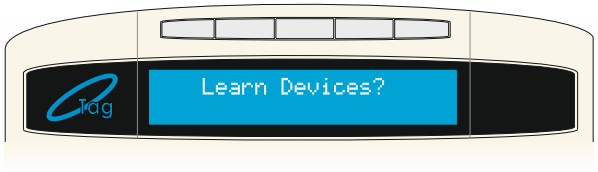
Control Bells

To learn/delete bells, press the YES key, or press NO to program keyfob buttons.



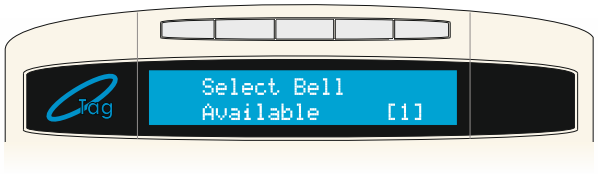
Learn Devices

To learn a new wireless device to the wireless ZEM, press the [YES] key. Press the [NO] key to delete inputs.



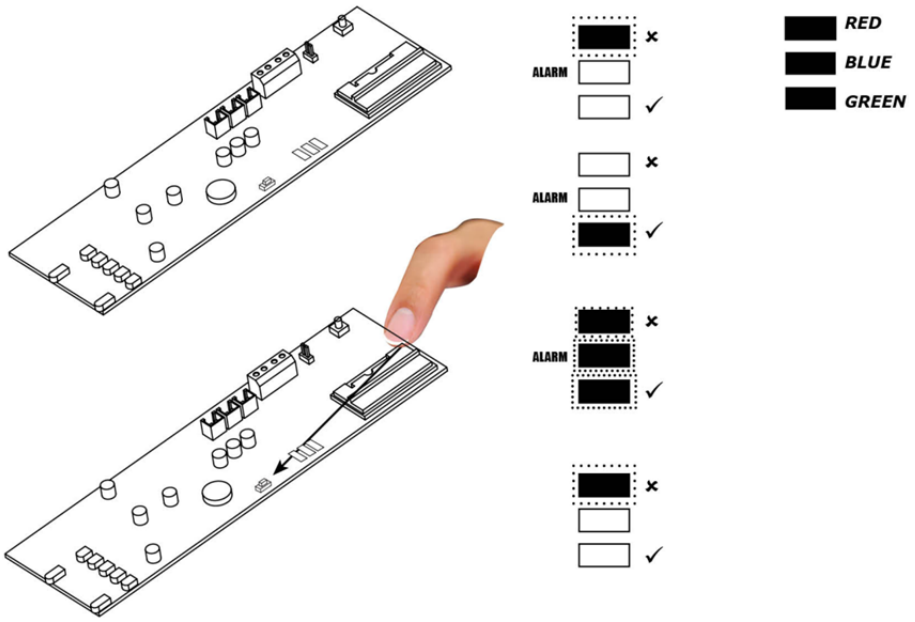
Available/Learnt

Use the [B] and [D] keys to select the relevant input that is to be learnt and press the [YES] key.



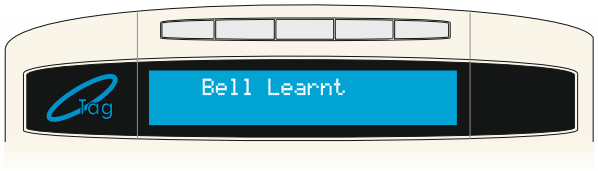
Learning

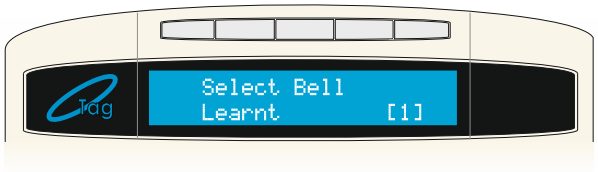
The following shows how to learn a wireless bell. During the learning process the 'LEARN' button must be held until the GREEN LED on the device flashes and the keypad display shows 'Bell Learnt'



If the **GREEN LED** on the wireless bell and the display shows 'Bell Learnt' the device has been learnt successfully.

Press the [YES] key.

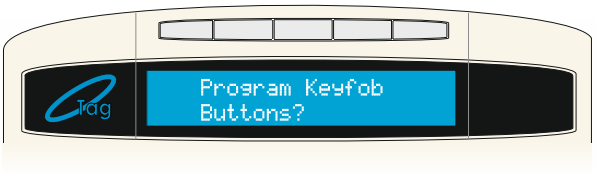




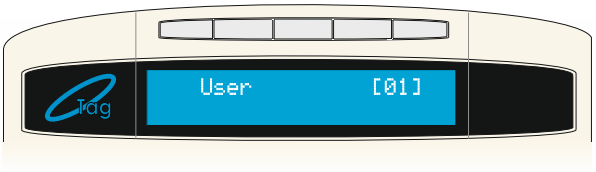
Program Keyfob Buttons

To program keyfob buttons, press the YES key, or press NO to exit.

NOTE: Any keyfob must be learnt in the Master Manager Menu before this function is enabled. See the User Manual for more information.



Use the B and D keys to select the user that the buttons need to be programmed for. Press the YES key.



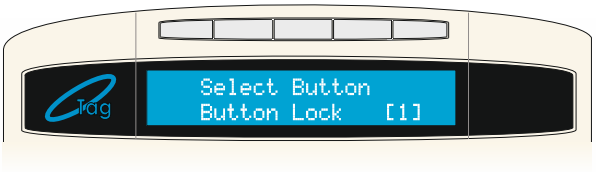
Use the B and D keys to select the button or select the button below. Press the YES key.

1: for 🔓. 2: for 🔒

3: **I** 4: **II**

5: 🔒 **+** 🔓. 6: **I+II**

7: 🔒 **+ I.** 8: 🔓 **+II**



Use the B and D keys to select the action. Press the YES key.

0: No Action 1: Show Status

2: Set Area 3: Unset Area

4: Latch Output 5: Timed Output

6: Panic Attack

5.7 Change Inputs

By default, all inputs are pre-set as '**unused**' so you will need to program each individual input you require. The input will not be 'live' (and hence cannot be walk tested) until you have exited the Engineer Menu (please see Page: 8)

5.7.1 Input Types

Number & Type		Operation
00	**Unused**	***Factory default.*** Input is programmed out of operation.
01	**Fire**	**Active at all times.** Audible response: Full (differentiated). Communicator: 'Fire' signal
02	**Gas**	**Active at all times.** Audible response: Full (differentiated) Communicator: 'Gas' signal
03	**HU**	**Active at all times.** Audible Response: Full (differentiated) Communicator: 'Hold Up' and 'Input HU' signals
04	**Silent HU**	**Active at all times.** Audible Response: None Communicator: 'Hold Up' and 'Input HU' signals
05	**Tamper**	**When unset:** Audible Response: Internal only Communicator: 'Tamper' signal. **When set:** Audible Response: Full (differentiated). Communicator: 'Tamper' and 'Unconfirmed' signals

Number & Type		Operation
06	**Intruder**	**Active when set.** Audible Response: Full Communicator: 'Intruder' and 'Unconfirmed' signals
07	**Final Exit (FX) (see type: 43 Final Exit 2)**	**Active when set** – initiates entry timer if system not unset before entry time expires: Audible Response: Full. Communicator: 'Intruder' and 'Unconfirmed' signals
08	**Entry Route (ER)**	**Active when set**, except during entry time. Audible Response: Full. Communicator: 'Intruder' and 'Unconfirmed' signals
09	**ER (Part FX)**	*(For use with level sets).* When fully set, acts as Entry route input, as above. When part set, acts as Final Exit input, as above.
10	**FX (Part ER)**	*(For use with level sets).* When fully set, acts as Final Exit input, as above. When part set, acts as Entry route input, as above.
11	**PTS**	**Active during exit time** to complete Setting procedure No audible or communicator response. *Note: May be used to act as 'doorbell' by use of 'chime' attribute.*
12	**Switcher**	**Active at all times.** No audible or communicator response Triggers associated output or switches other equipment
13	**Day Alarm**	**When set:** Audible Response: Full. Communicator: 'Intruder' and 'Unconfirmed' signals. **When unset:** Audible Response: Programmable. Communicator: 'Day Alarm' signal
15	**Ward Control**	Input is allocated by system software and cannot be reprogrammed to a different type, though relevant attributes may be adjusted.
16	**Fault**	**Active when unset.** Audible Response: Graduated internally Triggers 'Global Fault 1' outputs if the system is set. Triggers 'Global Fault 2' output if the system is set/unset.
17	**Closure Supervision**	**Active during Setting procedure.** No audible or communicator response. Prevents system being set whilst active
18	**Shunt Input**	**Active at all times.** No audible or communicator response Accepts input from keyswitch (or equivalent) to shunt the inputs assigned to it. Associated outputs are available. *After 10 seconds the detectors in the shunt list will be active. See page: 31*
19	**Unset Input**	**Active when set.** Accepts input from keyswitch (or equivalent) to Unset the Area/Level set assigned to it.
20	**Keyswitch Latched**	Accepts input from keyswitch (or equivalent) to Set/Unset the Set modes assigned to it. Setting includes normal exit time, etc. Requires latching action switch
21	**Entry Shock Input**	**Active when system set.** Works in conjunction with EE input type for detection of forced entry. See page 28 for details.
22	**Input Line Fail**	**Active when fail.** Will give a line fault alarm, and will signal telecom line fault signal on expiry of line fault timer. Works in conjunction with CCTV input.
23	**Keyswitch Pulsed**	Accepts input from keyswitch (or equivalent) to Set/Unset the Set modes assigned to it. Requires momentary action switch to toggle set/unset state.
29	**Interior**	This will work the same as an Intruder type input, the only difference is that when CID reporting is programmed then any inputs that are programmed as Interior will report CID event 132.
32	**Flood**	Work as a 24 hr input , any inputs that are programmed for Flood will activate the external siren and will report CID event 113.

Number & Type		Operation
39	**CCTV**	**Active at all times.** No audible or communicator response If the input line fail is active, the system will signal CID/SIA events for perimeter alarm and the CCTV input will open.
40	**Perimeter**	This will work the same as an Intruder type input, the only difference is that when CID reporting is programmed then any inputs that are programmed as Perimeter will report CID event 131.
41	**Keybox**	This input type will work similar to a switcher input, it does not trigger an alarm but will report CID event 250 and is also a useful input type when an output is required to to follow the Keybox type input.
42	**Medical**	This is a 24 Hr type input it will activate the external sounder and report a CID event 100.
43	**Final Exit 2**	Any input programmed as Final Exit 2 will act as input type 07, but the associated input will use Final Exit 2 rather than Final Exit 1 (programmed in Change Timers). This gives the opportunity to set different entry times for different entry routes.

NOTES: 'Part Set' refers to any combination other than all available Areas

A trigger from an Entry Route input will be stored for 2 seconds before an alarm is activated. If a Final Exit input is triggered within this time, the system will select entry time, rather than an intruder alarm.

5.7.2 Entry Shock Input Type (21)

This input type is designed specifically for use with systems installed using DD243 option 6.4.5

This input type is always used in conjunction with an Entry/Exit input. The EE input is a door contact on the initial entry door, and the Entry Shock input is a ***non-latching*** shock sensor fitted to the door frame in the vicinity of the lock. If the initial entry door is subjected to gross attack and forced open, then at the expiry of entry time only one further intruder input needs to be activated to signal a sequentially confirmed alarm – the Entry Shock input counts as the first to alarm. The Entry/Exit door contact must be opened with within 10 seconds of the shock detector triggering for the Entry Shock response to apply. Triggering the Entry Shock input in isolation will NOT generate an alarm of any kind.

5.7.3 Creating a Common Area

In certain situations, a 'common' area may be needed.
A common area is an area that only sets if other specific partitions are set. For example, a reception in a building will only need to be set if the offices and warehouse are set. If the office is set, but the warehouse isn't, then the reception would still need to be inactive so people would be able to leave the premises. An example of how to set this up is as follows:

Office: Inputs 1, 2, 3 and 4. **Warehouse:** Inputs 5, 6 and 7. **Reception:** Input 8.

Therefore what we would need to do in the above situation is program the office in one area (for example Area A) and program the warehouse in another area (for example in Area B). We then need to make the Reception 'common' to these two areas (Partitions A and B), so we need to select both partitions A and B for this input (input 8). After selecting the partitions for each input there is an option called "Input Area: Any/All". For inputs 1,2,3,4,5,6 and 7 we need to make this attribute 'any', as they work independently to the area they are assigned to. For input 8 (The common area), we need to make this attribute as 'all', therefore when partitions A and B are both set, the reception (input 8) will automatically set as well. In these examples, the user codes could be allocated to individual areas A and B or to both areas. However, the keypad controlling the common area MUST be programmed to be "IN" exactly the same combination of areas as the common inputs – ie in "AB" in this example.

5.7.4 Input Attributes

Attribute	Response Modification
Chime	System loudspeaker(s) will 'chime' when an input triggered whilst the alarm panel is unset. Note: The input concerned will not indicate on the display.
Single	System chimes once when the input is triggered.
Follow	System chimes until the input is cleared.
Omittable	Enables the input to be manually omitted during the Setting procedure.
Double Knock	The control will only generate an alarm if this input is triggered twice within a pre-set period, or if the input remains in fault condition for that period.
Dual Trip	The control will only generate an alarm if this input, and another like-programmed input with adjacent number, are in alarm condition at the same time. Either input in alarm condition will prevent the system from Setting.
Normally Open	Enables the system to respond correctly when detectors of 'normally open' configuration are wired to the system. Alternatively converts input types which default to 'normally open' (e.g. PTS) to operate with normally closed devices.
Walk Test	If enabled, the input will have to be walk tested before the system can be set.
Monitor Activity	Enables an input to generate an alarm if the input does not see any activity for a period specified by the NAT (Non Activity Time) timer.
Special Log	Forces a log entry when the input is opened or closed, even when an alarm does not result. May be selected to apply when a system is set, when unset, or always.
Paired Input	For use in Grade 3 iD systems (or EoL inputs on peripheral devices fitted software prior to version 5). Select to 'YES' for each of the two biscuits acting as the input. **Fault Input:** Select to 'YES' for the biscuit acting as the 'fault & anti-mask' **Paired With:** For both biscuits enter the input number with which each is paired.
Confirm Group	If one or more inputs are selected within the same confirm group, all confirmed signals will be disabled. If confirm group is selected as '00' the inputs are not part of any group. If inputs are allocated to group 99 they will generate an alarm that results in an intruder (unconfirmed) signal to an ARC. They will not under any circumstances generate a confirmed signal, regardless of which group the input that selected the 'unconfirmed' alarm is allocated to.

All attributes are disabled at default.

Any input may be programmed with any combination of these attributes, except where stated.

5.7.5 Masking Response

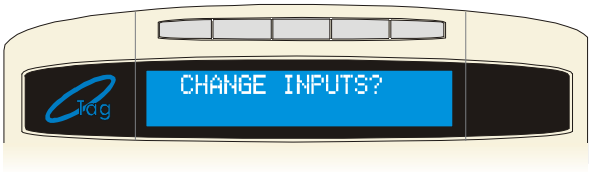
When unset, a masking event will generate an audible "alert" that requires response in the normal way. There will be NO signal transmitted to the ARC. When set, a masking event will generate a normal 'intrusion' response including "intruder" or "unconfirmed" output, but will NOT result in a confirmed alarm if paired with a normal activation of the same detector. This harmonises with the requirement of EN50131-1 cause 8.4.5 and the insurer's preference expressed in BSIA Form 171.

5.7.6 Automatic Inhibit of Inputs

Inputs may be automatically inhibited (omitted) at the time of reinstatement at the end of confirmation time. The number of times that this takes place is controlled by the "Re-Arm Number" in the timers section. See page: 39.

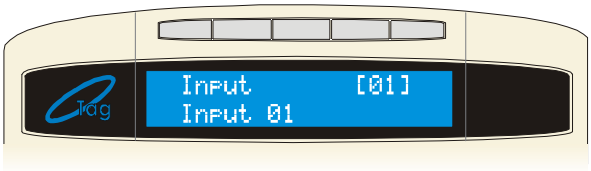
Change Inputs

Using the [B] and [NO] keys, scroll to '**CHANGE INPUTS?**'. Press the [YES] key



Input

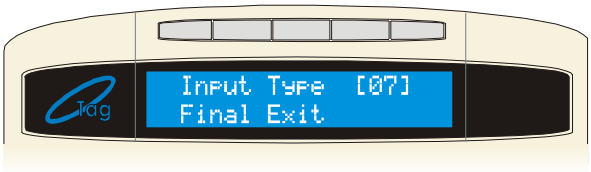
Select the input number you wish to program and press the [YES] key.



Input Type

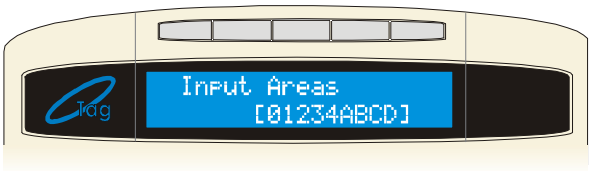
Select the input type (See the 'input types' table – Page: 26) by using either the numeric code or the [B] and [D] keys.

Press the [YES] key.



Input Area

Enter the areas/level sets you would like the input to operate in (To select level setting instead of areas please refer to Site Options "Use Level Set", see page: 54). *NOTE: The primary Areas are A, B, C and D.* Press the [YES] key.

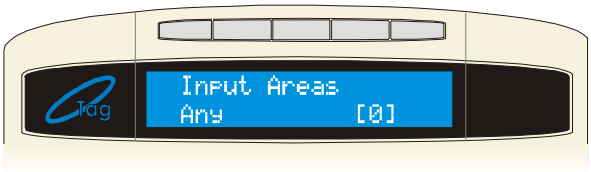


(This shows the display of a EURO 76 panel)

For area setting systems only:

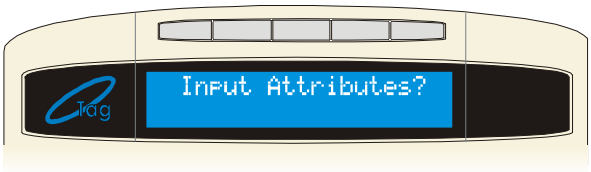
Enter [0]: for **Any** Enter [1]: for **All**

Press the [YES] key



Input Attributes

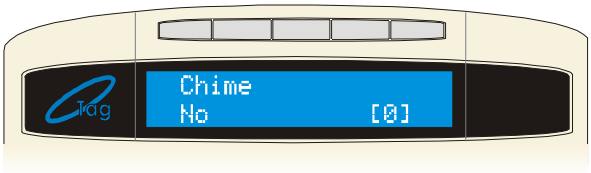
Press the [YES] key to select any attributes for the input (for details on each attribute see page: 29)



Chime

Enter [0]: for **No.** Enter [1]: for **Single.**

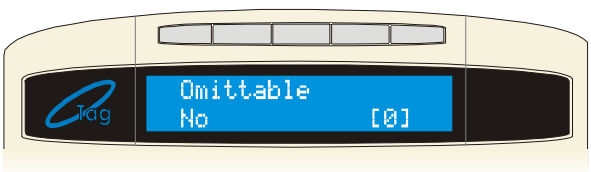
Enter [2]: for **Follow.** Press the [YES] key



Omittable

Enter [0]: for **No.** Enter [1]: for **Yes.**

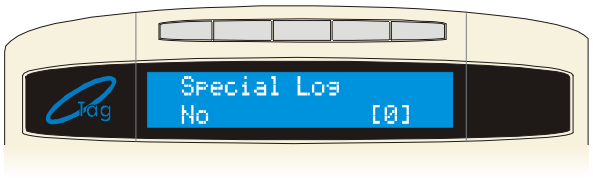
Press the [YES] key. Repeat for Double Knock, Dual Trip, Normally Open, Walk Test, Monitor Activity, Until special log:



Special Log

Enter [0]: for **No.** Enter [1]: for **Set.**

Enter [2]: for **Unset.** Enter [3]: for **Always.** Press the [YES] key. Paired Input will be displayed, leave this setting and press the [YES] key.

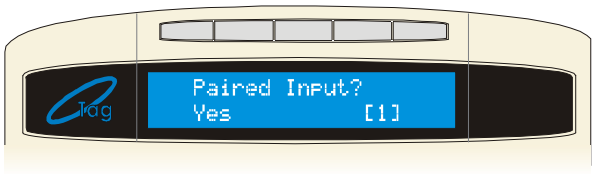


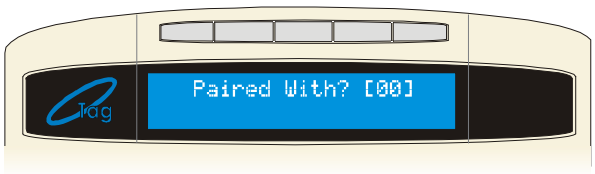
Paired Input (With iD Plus Biscuits G3)

When using two biscuits on a detector, set this to yes. Press the [YES] key.

Fault Input will be displayed. If you are programming biscuit 2, the biscuit connected to the mask/fault terminals of the detector, set this to 'yes' otherwise, leave at 'no'.

Press the [YES] key. 'Paired with' will be displayed. Enter the input number of the biscuit you are pairing with (for each biscuit of the pair), e.g. if programming biscuit 2, enter the input number of biscuit 1. Press the [NO] key.

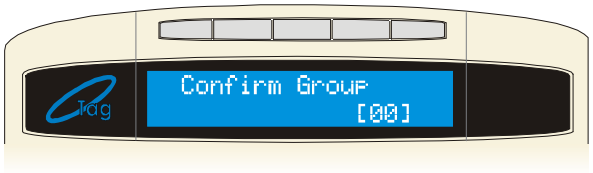




Confirm Group

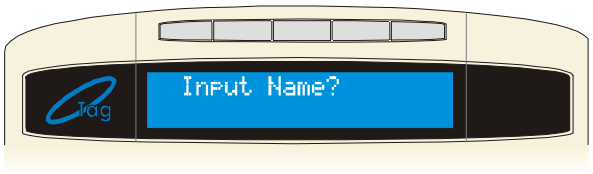
Enter the Confirm Group if used.

Press the [YES] key



Input Name

If you would like to enter a name for the input, select the [YES] key. Text programming is described on page: 17. Press the [YES] key.Enter the input location if required. Press the [YES] key. Repeat all the above for further inputs, or press the [NO] key to return to the Engineers Menu.



NOTE: After programming the inputs, it is necessary to exit the Engineer Menu for the programming to take effect, before the inputs are walk tested, etc.

5.7.7 Shunt Inputs

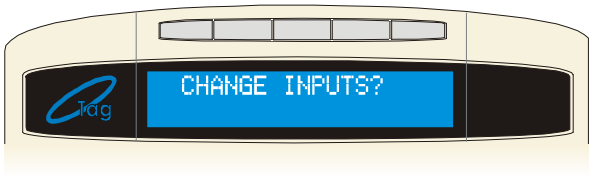
A shunt group may consist of any number of inputs programmed as Intruder, Tamper, Day Alarm and Entry Route types. These must all be allocated in the same Area. ***NOTE: These will need to be programmed first.***

The inputs in the shunt group/list will only activate after 10 seconds of the nominated shunt input. For example, if input 1 is programmed as 'Shunt Input', and inputs 2 and 3 are programmed as "Day Alarm", then once input 1 has been opened, after 10 seconds inputs 2 and 3 become active. (Inputs 2 and 3 will not become live after 10 seconds if either detector is in alarm condition).

Action	Status	Outputs
Shunt Input closed (shunted)	Inputs within the shunt list are inactive	The 'Follow Input' output is live
Shunted Input triggered	No response	
Shunt Input opened (unshunted)	-	The 'Follow Input' output clears. The 'Shunt Fault' output is live for 10 seconds.
After 10 seconds	Inputs in the shunt list are active	Indications off.
Shunt Input opened with an active detector (attempting to unshunt)	-	The 'Follow Input' output clears. The 'Shunt Fault' output pulses until the shunt is reset or the input fault clears.
Active input clears	-	The 'Shunt Fault' output is live for 10 seconds. (Will not function correctly on an ATE pin).
After 10 seconds	Inputs in the shunt list are active	Indications off.
Shunted input triggered (whilst not triggered)	Normal input response	(Note: depends upon the status of the Area in which the shunt is located).

Change Inputs

Using the [B] and [NO] keys, scroll to '**CHANGE INPUTS?**'. Press the [YES] key

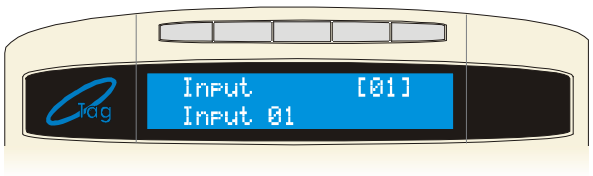


Input

Select the input number you wish to program and press the [YES] key.

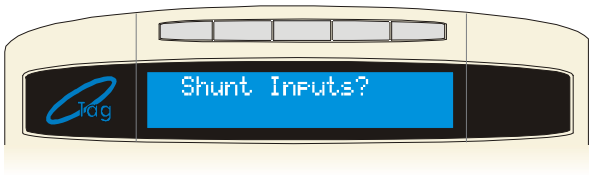
Input Type

Select the shunt input type (type 18)



Shunt Inputs

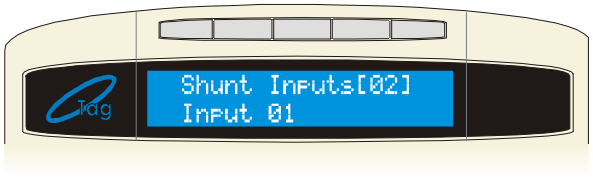
If you would like to select the shunt inputs for the selected input press the [YES] key.



Enter the inputs you would like in the shunt list, after each one press the [YES] key. Each input selected will scroll on the display on the bottom line.

If the input you have selected doesn't appear, make sure that input is programmed correctly (Intruder, Tamper, Day Alarm or Entry Route).

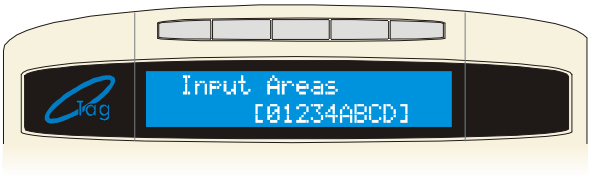
Once they have all been entered press the [NO] key, and press the [NO] key again.



Input Area

Enter the areas/level sets you would like the input to operate in (To select level setting instead of areas please refer to Site Options "Use Level Set", see page 54). *NOTE: The primary Areas are A, B, C and D.* Press the YES key. For area setting systems only:

Enter 0: for **Any** Enter 1: for **All**

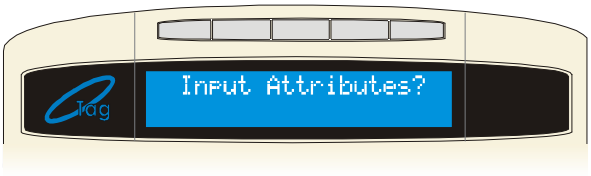


(This shows the display of a EURO 76 panel)

Input Attributes

Press the YES key to select any attributes for the input (for details on each attribute see page: 29)

Repeat the programming for attributes as described on page: 30



5.8 Assign Keypads/Readers

Ensure that all keypads and readers are addressed correctly before enabling them in this function. Please see page: 16 for more information.

5.8.1 Reader Is:

This option will only appear when you program a Reader into the system. You can then select how you would like the Reader to operate.

Set Point: This will make the Reader act like a normal keypad (Setting/Unsetting the system etc) ***(Default setting)***

Ward Control: A reader can be used to create wards. For example: A keypad may control a full area, but in the area you may wish to control certain inputs only.

Access Control: If an access control system is installed then you will need to program the reader as this type.

Entry Control: Used to lock/unlock doors. The external or internal reader can have maglocks connected to them. This option is used in conjunction with 'tag opens doors' in Site Options page: 54. See page 125 for installation details.

Unset Only: If you wish to use the Reader to unset the system only, select this type.

5.8.2 Set Point Sets

An "Setting Point" means that you can program the keypad / reader to set certain Areas only. This is used in conjunction with the Areas allocated to a user code.

For example, if a user code is programmed to operate Areas 'A' and 'B', but the keypad / reader is only programmed to Set Area 'A', then the system will Set only Area 'A'.

At default is Area A is selected

5.8.3 Set Point Unsets

An "Unsetting Point" means that you can program the keypad / reader to unset certain Areas only. This is used in conjunction with the Areas allocated to a user code.

For example, if a user code is programmed to operate Areas 'A' and 'B', but the keypad / reader is only programmed to Unset Area 'A', then the system will Unset only Area 'A'.

At default is Area A is selected

5.8.4 Set Point In

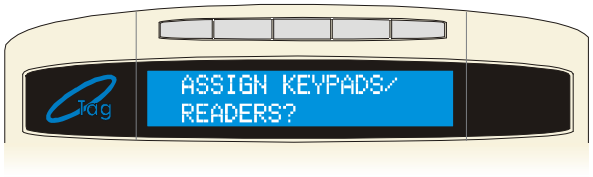
The keypad needs to also be told which Areas it is operating "in". For example, a keypad may only be needed to operate in Area A, but other code users may use the keypad to quick Set other Areas (such as a cleaner, director, caretaker etc). Therefore if Areas A and B are selected in the previous options (Set point arms and disarms), but Area A only is selected in 'Set point in', then Area B will quick set once a valid tag/code has been entered. To program Areas operating with their programmed timer, then the Areas need to be entered into the "Set Point In" function.

At default is Area A is selected

Assign Keypads/Readers

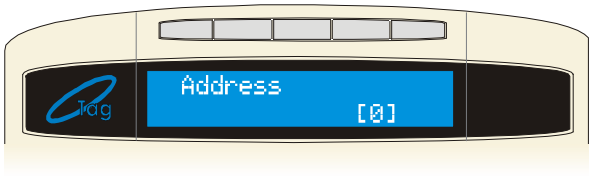
Using the [B] and [NO] keys, scroll to **'ASSIGN KEYPADS/READERS?'**

Press the [YES] key



Address

Enter the address of the keypad/reader you wish to assign. Press the [YES] key



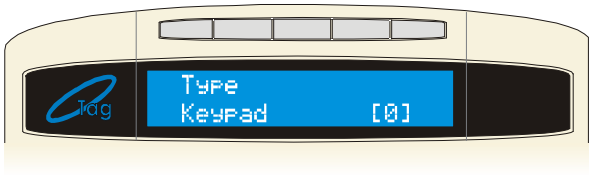
Type

Enter [0]: for **Keypad**

Enter [1]: for **Reader**

Enter [2]: for **Not Used**

Press the [YES] key



Reader Is

NOTE: This function will only be displayed if you have programmed a Reader.

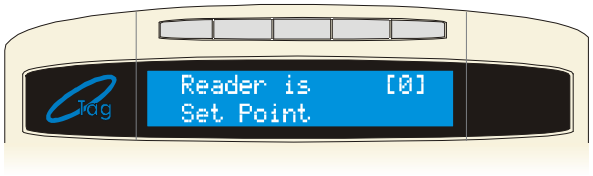
Enter [0]: for **Set Point**

Enter [1]: for **Ward Control**

Enter [2]: for **Access Control**

Enter [3]: for **Unset Only**

Enter [4]: for **Entry Control***Press [YES]



Set Point Sets

Select the Set Points you would like for 'Setting' the system. *Please note the primary Areas are A,B,C & D.*

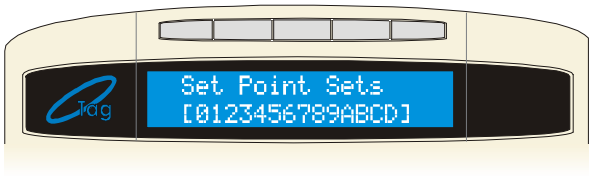
Press the [YES] key

Repeat for Set Point Disarms,

Press the [YES] key

Repeat for Set Point In

Press the [YES] key.



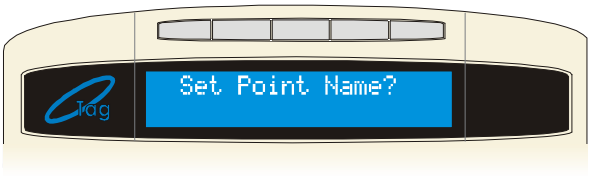
Set Point Name?

If you would like to select an Set point name press the [YES] key.

Enter the text to identify the Set point. Text programming is described on page 17.

Repeat for all other keypads/readers or press the [NO] key to exit.

You will be returned to the Engineer Menu.



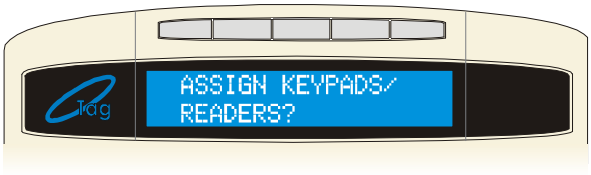
5.8.5 Access Control / Entry Control

The following programming shows how to set up the Access Control facility if you are using it. Also the same programming process applies to 'Entry Control' which allows a tag reader to control an entry point.

Assign Keypads/Readers

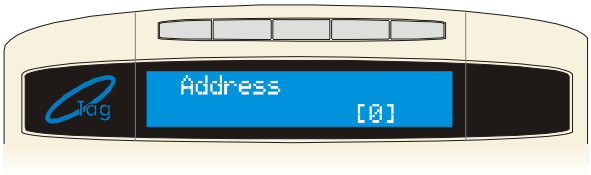
Using the [B] and [NO] keys, scroll to **'ASSIGN KEYPADS/READERS?'**

Press the [YES] key



Address

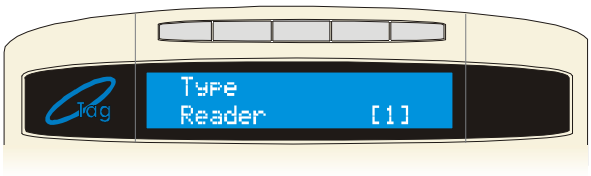
Enter the address of the keypad/reader you wish to assign. Press the [YES] key



Type

Enter [1]: for **Reader**

Press the [YES] key

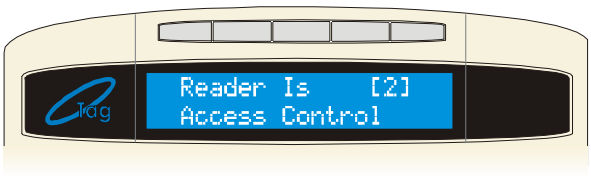


Reader Is

Enter [2]: for **Access Control**

Or Enter [4]: for **Entry Control**

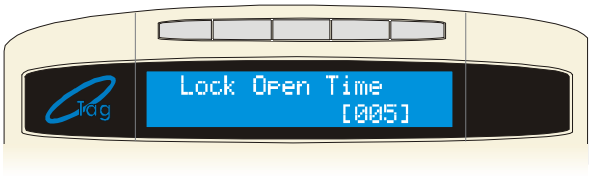
Press the [YES] key



Enter the Lock Open Time (max: 250 seconds).

This is the time the door release is going to be active when a valid tag's presented.

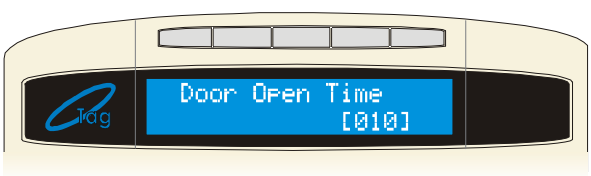
Press the [YES] key.

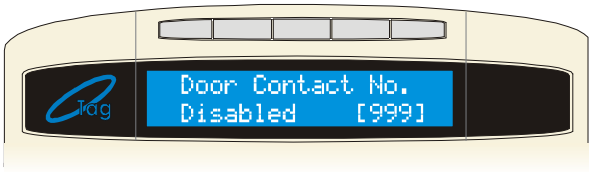
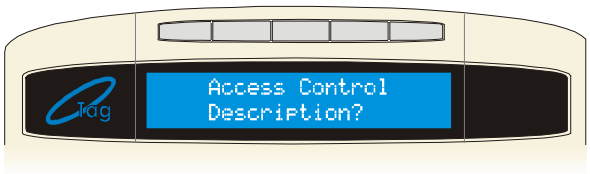


Enter the Door Open Time (max: 250 seconds).

This is the time the door is allowed to be open before triggering an alarm.

Press the [YES] key.



Enter the input number to monitor the chosen door. Please note that this must be selected for the door monitoring to function. Entering '999' disables the monitoring for this door.	
To enter a personal name for the access control (based on its address), press the YES key. Use the predictive text programming to enter this, see page: 17. Press the YES key, Enter the location (used for reference only) and you will be returned to the engineer menu.	

5.8.6 Ward Control

A Ward is sub-vision of an area, providing a degree of independent control so that in many systems it may be used as a separate partition. Control is by means of a dedicated Set/Unset Tag Reader located OUTSIDE the ward area. No entry/exit route is available. The number of Wards available is limited to the number of setting points not otherwise allocated as keypads, set/unset readers or access control or guard tour points. The maximum wards are:

46: 5, **76:** 7, **162**: 15 **280:** 29

Each ward may consist of any number of 'intruder' inputs, all of which must be allocated to the same area. No input may be allocated to more than one ward.

Operation may be by proximity tag, or by key (or other) switch wired into the first input on the tag reader. Wards using switch operation MUST be those on which the inputs are live (i.e. shown in the table on the next page). Tags for Ward control are programmed through the Manager menu.
The ward controller provides 'Alarm' and 'Can Set' outputs dedicated to that Ward. It also provides relevant indications, including Set/Unset status, so should always be located adjacent to the controlling Keyswitch where this is used.

If the option 'Auto Readmits when set' is selected as 'WHEN AREA SET' then the ward will always set when the area in which it located is set. If selected as 'NEVER' it will always require manual setting.

The Ward must ALWAYS be unset manually.

An additional option is available the 'SITE OPTIONS' menu, to permit a 'misoperation' (abort) signal to be generated by silencing an alarm at the Ward Controller.

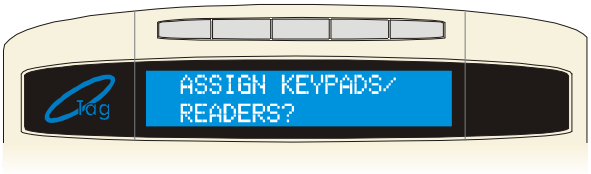
Operation of a Ward

Action	Status	Notes
Normal (unset) status	Detectors within Ward are inactive	'Unset' indication lit
Ward input triggered	No response	
Attempt to set Ward with input in fault	-	'Fault' LED flashes and intermittent tone to indicate 'cannot set'
Set Ward with no faults	Ward sets (detectors live)	'Unset' indication goes out
Ward input triggered	Alarm generated	'Alarm' LED lights, alarm tone generated
Ward Controller unset	Ward unsets	'Unset' indication lights
Valid code entered at a Keypad whilst alarm running	Alarm silenced	Ward remains set.

Assign Keypads/Readers

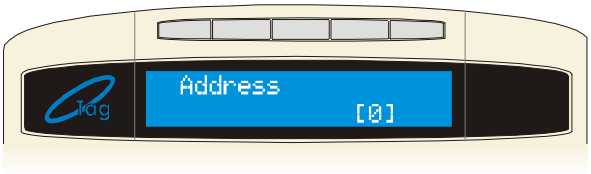
Using the [B] and [NO] keys, scroll to **'ASSIGN KEYPADS/READERS?'**

Press the [YES] key



Address

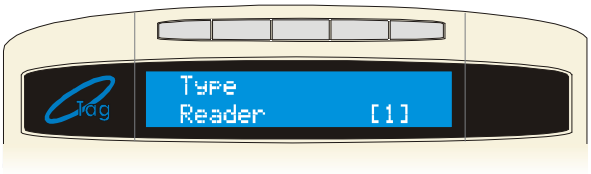
Enter the address of the keypad/reader you wish to assign. Press the [YES] key



Type

Enter [1]: for **Reader**

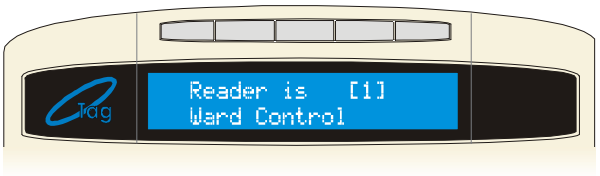
Press the [YES] key



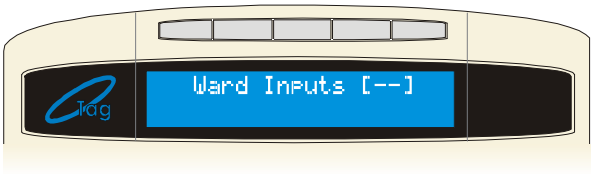
Reader Is

Enter [1]: for **Ward Control**

Press the [YES] key



Enter the Ward Inputs. Press the [YES] key. Once you have entered them, they will appear on the bottom line, after you have entered all the ward inputs you desire, press the [NO] key.

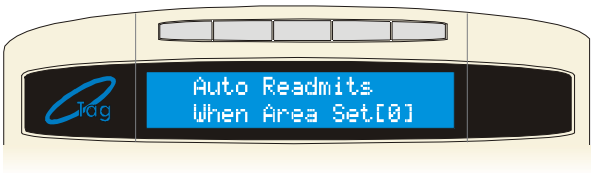


Auto Readmits

Enter [0]: for **When Area Set**

Enter [1]: for **Never**

Press the [YES] key

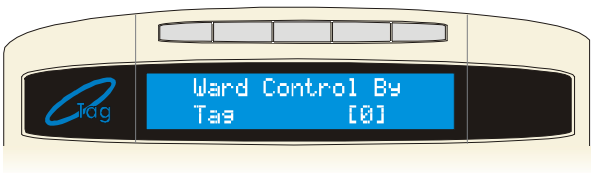


Ward Control By

Enter [0]: for **Tag**

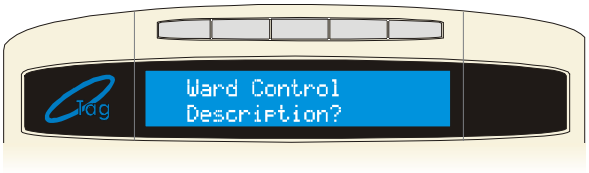
Enter [1]: for **Input**

Press the [YES] key



Ward Ctrl Description

At default the ward control description is 'Device 01' which needs to be referenced when adding codes/tags for the Ward Control in the master manager menu. This description can be changed using the predictive text (see page:17 for details).



5.9 System Displays

Please see page 17, "Text Programming" section for this function as it requires programming Area text, sign on messages etc.

5.9.1 Area Texts

You may choose how you want each Area/Level Set to be displayed, i.e. "Area A" may be used to fully Set a house therefore you may want to call it "Full House Set" for example. You can have a maximum of 16 characters on the display.

5.9.2 Sign On Message

The Sign on Message is the main display on the top line in unset mode.

5.9.3 Site Name

The Site Name is used as a "Site Reference" which if used must be also used within the EURO Insite Software in order for the software to connect to the EURO system.

5.9.4 Display When Set / Display Alarms / Display HU's / Display Inputs

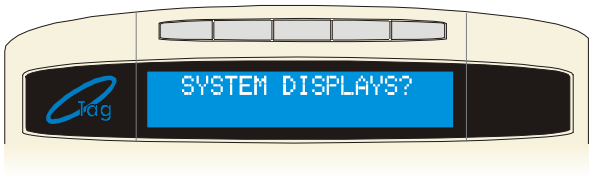
If 'Display when set' is enabled, then the Area Text will be displayed on the LCD keypad once the system is fully set. ***The Default is No. (Not compliant with PD6662 / EN50131-1)***

If Display Alarms / HU's are enabled, they will show any alarms that are activated before a valid user code/tag is entered. If Display Inputs is enabled, any inputs activated in day mode will be displayed.

System Displays

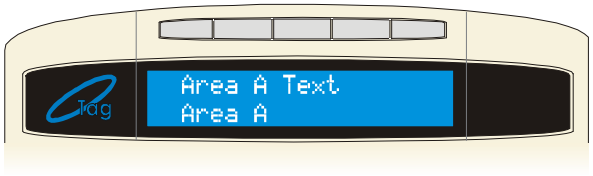
Using the [B] and [NO] keys, scroll to **'SYSTEM DISPLAYS?**'

Press the [YES] key



Area Text

Enter the desired text for the Area; press the [YES] key to enter the text for all other Areas. You can also add/change the text for "Full" Area Setting, the sign on message and the site name label. Press the [YES] key once you have changed each text display.



Display When Set

Enter [0]: for **No** Enter [1]: for **Yes**

Press the [YES] key.

Repeat for Display Alarms , HU's and Inputs. Press the [YES] key. You will be returned to the Engineer Menu.

5.10 Change Timers

All the timers can be changed in this function, the table below shows the different timers available and the default values:

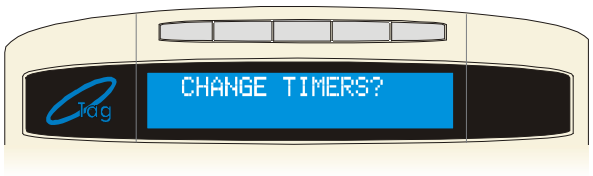
Timer	Function	Range	Default
Entry Time	Entry time for each area. (if programmed as the input type 'Final Exit')	0 – 255 secs	30
Entry Time 2	Entry time for each area (if programmed as the input type 'Final Exit 2')	0 – 255 secs	30
Exit Time	Exit time for each area.	0 – 255 secs	30
Siren Time	Cut off time for external sounder. Separate for each area.	2 – 15 minutes	15
Confirm Time	Time period during which a second activation must occur to qualify as 'sequentially confirmed' alarm. ***NOTE: BS8243 specifies a confirm time between 30 and 60 minutes.*** *This also can be used in conjunction with testing an omit signal.*	1 – 99 minutes	30
HU Confirm Time	Time period during which a second activation on a hold alarm must occur to qualify as 'sequentially confirmed' alarm. ***NOTE: BS8243 specifies a confirm time between 8 and 20 hours.*** *This also can be used in conjunction with testing an omit signal.*	8 – 20 hours	8
Siren Delay	Delay after intruder alarm before siren live. ***NOT valid within 3 minutes of final set or after entry time started.***	0 – 20 minutes	0
Strobe Time	Time strobe output remains live after siren time ends. ***'99' means endless.***	0 – 99 minutes	0
Re-Arm No.	Number of times system re-arms after bell time ends. ***NOTE: Re-arm number applies to each area, and does not affect emergency alarms. '9' means always re-arm.***	0 – 9	3
AC Signal Delay	Time delay before mains failure or technical alarm notified. ***NOTE: Setting '250' = never alarms. System change-over to battery supply and associated visual alert indication is always immediate.*** *Some ATE impose a randomised delay in notifying a mains fail. This should be taken into account when setting this timer.*	0 – 250 minutes	40
Speaker	***Time speaker and keypad bleeper outputs remain live after siren time ends. '99' means endless.***	0 – 250 minutes	0
Settle	Time between final exit input closing, and system setting.	0 - 255 seconds	5
Double Knock	Length of filter period applied to inputs with 'Double Knock' attribute.	0 – 75 seconds	10
Pre-Alarm	Delays 'Intruder' output signals if entry time has started. ***Pre-alarm time must be set for at least 30 seconds to comply with PD6662***	0 – 255 seconds	30
Line Fault	Duration of Telecom Line Fault before 'Line Fault' alarm triggered. *NOTE: In the case of devices connected via the ATE pins, this time is additional to that already applied by the ATE.*	0 – 250 seconds	20
Set Fail	Time after which 'Set Fail' operation will be invoked if exit procedure not completed.	0 – 255 seconds	40
Guard Code Alarm	Minimum time an alarm must have existed before a 'Guard' code will be accepted to unset.	0 – 10 minutes	3
Fire Siren Time	Cut off time for fire alarm. '99' means endless.	1 – 99 minutes	99
Set Fail Warning	This function works in conjunction with the 'Set Fail Time'. Once the 'Set Fail Time' has been exceeded (40 seconds at default), warning entry tones will be heard indicating that the 'Set Fail Warning' timer has started. If a 'Final Door' has been opened and closed during the 'Set Fail Warning' time, the system will set. If the exit	0 – 99 minutes	0

Timer	Function	Range	Default
	door has not be opened and closed during the programmed 'Set Fail Warning' time, the system will go back to its unset state once the timer has expired. The 'Set Fail Warning' timer may be programmed between 0 - 99 minutes. **NOTE: This function will only work if 'Set Fail = Alarm' is programmed as 'No' in Site Options**		
Input NAT Days	NAT stands for Non-Activity. This is used in conjunction with the input attribute 'Monitor Activity', and will monitor the chosen input for the selected number of days.	0-14 days	14
Input NAT Hours	NAT stands for Non-Activity. This is used in conjunction with the input attribute 'Monitor Activity', and will monitor the chosen input for the selected number of hours.	00-23 hours	0
Wireless Supervision Time	This option is only applicable if wireless devices are installed. It is the time window before a wireless supervision fault will be signalled. For example: if the time is set for 2 hours, then any device that doesn't communicate with the wireless expander within that period will cause a supervision fault. This must be programmed to 2 hours or less for compliance to EN50131.	1-99 hours	2
Wireless Jamming Time	This option is only applicable if wireless devices are installed. It is the time window that if a wireless device had its signal 'blocked' a fault would display. For example, if the time is set to 30 seconds, then if a wireless device is 'jammed' longer than 30 seconds a fault will be displayed. This must be programmed to 30 seconds or less (but not zero) hours or less for compliance to EN50131.	0-100 seconds	100
Service Time	This is a timer that can be set in days, and will display a message to the user warning that a service is due. An engineer code will clear the message.	367 days	0

Change Timers

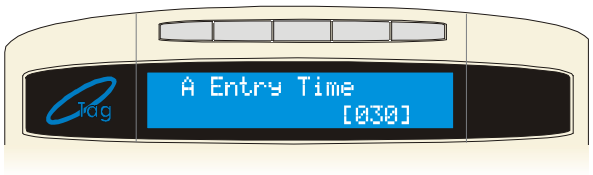
Using the [B] and [NO] keys, scroll to **'CHANGE TIMERS?'**

Press the [YES] key



Timers

The timers as displayed in the table on the previous page will be displayed, adjust the time as required and press the [YES] key. Once you have finished, press the [NO] key, you will be returned to the Engineer Menu.



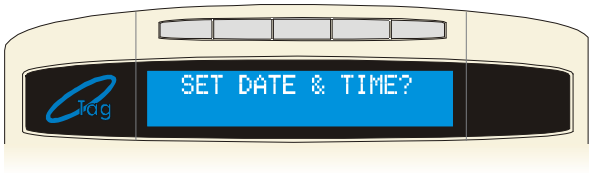
5.11 Set Time and Date

All log entries and the system display include the time and date. This may be also programmed in the Master Manager Mode. ***NOTE: Please note that powering down the system will reset the time and date information.***

Set Date and Time

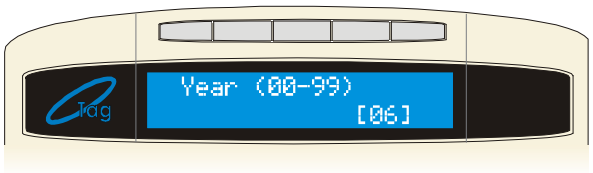
Using the [B] and [NO] keys, scroll to **'SET DATE AND TIME?'**

Press the [YES] key



Year

Adjust the year as required using the numeric keys. Press the [YES] key. Repeat for Month, Day and Hours. Press the [YES] key.You will be returned to the engineer menu.



Day Saver Time Adjust

Enter [0]: for **No**

Enter [1]: for **Yes**

Press the [YES] key

5.12 Exit Modes

The '**Exit Modes**' operate the Setting procedure of the EURO system. The following Exit Modes are available:

5.12.1 Timed

The EURO system will only set when the programmed Exit Time has expired (See 'Change Timers' page 39) providing that all inputs are closed. ***(Default setting for all areas/level sets). NOTE: This is NOT suitable for systems installed to comply with DD243.***

5.12.2 Final Door

The EURO system will only set when an input programmed as Final Exit is either closed (if the input was opened when Setting started) or its single opening and then closing (if the input was closed).

This mode may also be used for *'lock set'* operation: securing the lock completes the Setting procedure, unlocking starts the entry time.

5.12.3 Timed/Final

This function follows 'timed' operation, except that the timer will be overridden if an Final Exit input is opened and closed before the timer expires (See above: Final Door).
NOTE: This is NOT suitable for systems installed to comply with DD243.

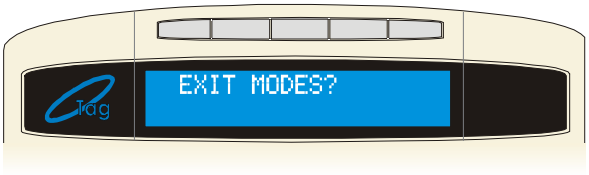
5.12.4 PTS (Push To Set)

PTS = Push to Set. The EURO system will only Set when a 'Push to Set' button has been pressed. This function will override the programmed Exit Time.

Exit Modes

Using the [B] and [NO] keys, scroll to **'EXIT MODES?'**

Press the [YES] key



Area Exit Modes

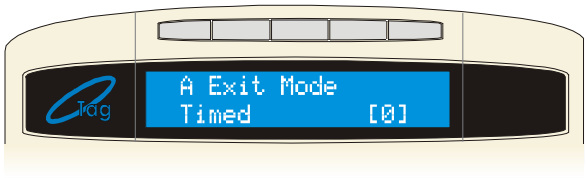
Enter [0]: for **Timed.**

Enter [1]: for **Final Door**

Enter [2]: for **Timed/Final**

Enter [3]: for **Push To Set**

Press the [YES] key. Repeat for each Area or press the [NO] key to return to the Engineer Menu.



5.13 Change Codes (Duress/Guard Only)

All codes may be 4, 5, or 6 digit or proximity tags. Using a 5 or 6 digit code will automatically block several possible 4 digit codes that clash with it. Please note that the EURO System will only comply with Grade 3 if you have "5 digit codes" enabled. ***NOTES: Only Duress or Guard codes can be changed by the Engineer, Normal user codes can only be changed in The Manager Mode. The Master User and Engineer Codes cannot be deleted.***

5.13.1 Code Types and Numbers.

Alarm System	User Codes/Tags	Wireless Keyfobs	Duress/Guard Codes
EURO 46	75 (inc. 32 keyfobs)	32	10
EURO 76	100 (inc. 32 keyfobs)	32	20
EURO 162	200 (inc. 32 keyfobs)	32	20
EURO 280	500 (inc. 32 keyfobs)	32	20

5.13.2 Wireless Keyfobs

Wireless keyfobs can only be programmed from the Master Manager Menu, and can only be learnt to the system if a wireless ZEM is installed.

5.13.3 Code Types

Please note that Master Manager and Engineer Codes can only be changed, they cannot be deleted.

User Type	Functions	Operation
User Default: 1234	Set and Unset System. Also for Access Control and Sub Area Control functions	Programmed by Manager only.
Manager	Set and Unset System Also access to Manager menu functions	Programmed by Manager only.
Master Manager Default: 2222	Set and Unset System. Also access to Manager menu functions	Programmed by Manager or Engineer.
Engineer Default: 1111	Access to all engineering functions; also Set/Unset system for test purposes.	Programmed by Engineer.
Duress	Unsetting system, generates silent 'Duress' or 'Hold Up' signal. NOTE: ACPO policy prevents use of Duress codes for police all purposes.	Programmed by Engineer.
Guard	Unsetting system, but only after an alarm has been active for a minimum time (programmable). Also Set system. An output type is available to signal whenever this code is used.	Programmed by Engineer.

5.13.4 User Set Options

The User Codes can be programmed as the following:

Unset/Set: The code will set and unset the EURO system ***(Default)***

Unset Only: The code will only unset the EURO system once it is set.

Set Only: The code will only set the EURO system.

None: The code will not be used to set and unset the system. It can be used for use with tags to be used for Access Control purposes but not permitted to set/unset the system.

5.13.5 Flexi Set

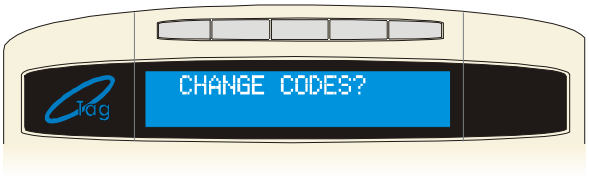
If enabled, the user will be able to select which Areas they can set/unset; from those the code is valid for, taking into account the areas the keypad/reader is valid for.

If disabled, the user code will automatically set the selected area(s). This option is commonly used if a proximity tag has been used on the system.

Change Codes

Using the [B] and [NO] keys, scroll to '**CHANGE CODES?**'

Press the [YES] key



5 Digit Pins

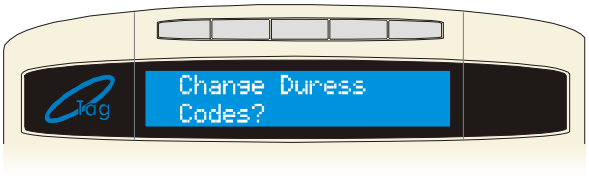
Enter [0]: for **No**

Enter [1]: for **Yes (For Grade 3 – *Default*)**

Press the [YES] key.

Change Duress Codes

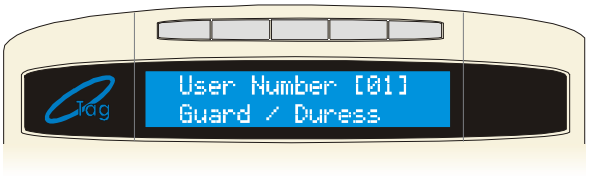
Press the [YES] key to Change the Duress Codes, or for the next function press the [NO] key. **NOTE: User codes can only be changed in the user manager mode**



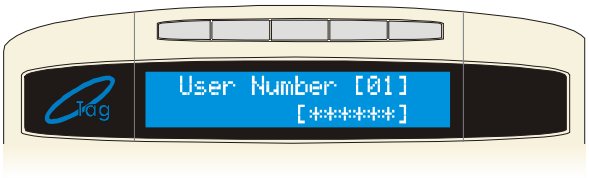
Duress/Guard Codes

Enter the required User Number using the numeric keys.

Press the [YES] key



If a code or tag is already allocated, the display will show [******]. Enter the new code, or present a tag to keypad. To erase the existing code press the [C] key. Press [YES] key

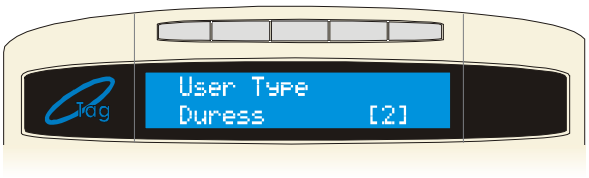


User Type

Enter [2]: for **Duress *(Default)***

Enter [3]: for **Guard**

Press the [YES] key

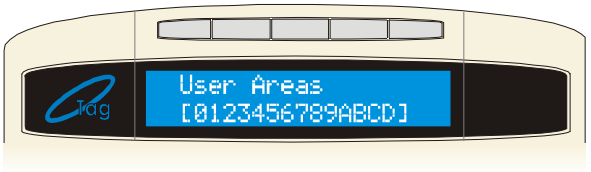


User Areas

Select the Areas the code will be valid for.

Please note the primary Areas are A,B,C & D.

Press the [YES] key



User Set Options

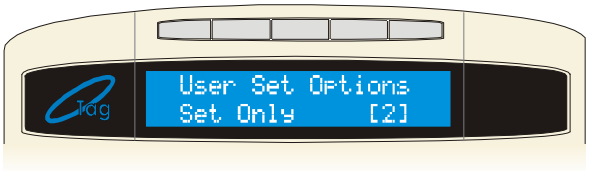
Enter [0]: for **Unset/Set *(Default)***

Enter [1]: for **Unset Only**

Enter [2]: for **Set Only**

Enter [3]: for **None**

Press the [YES] key

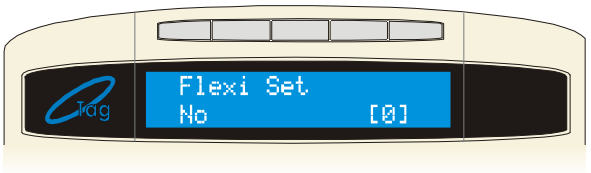


Flexi Set

Enter [0]: for **No *(Default)***

Enter [1]: for **Yes**

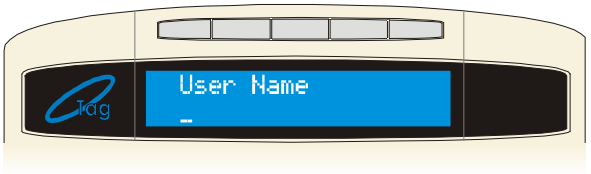
Press the [YES] key



User Name

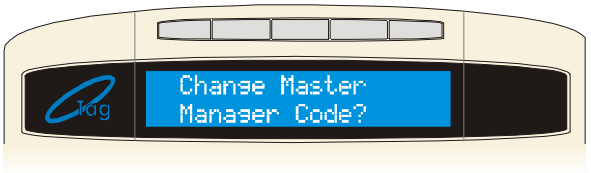
Enter the text to identify the user. Predictive text Programming is described on page 17.

Press the [YES] key.



Change Master Manager Code?

Press the [YES] key to Change the Master Manager Code and repeat the options as shown above, or for the next function press the [NO] key.



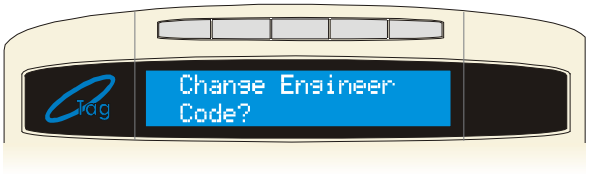
Change Engineer Code?

Press the [YES] key to Change the Engineer Code or for the next function press the [NO] key.

The Engineer Code cannot be deleted.

Press the [NO] key.

You will be returned to the Engineer Menu.



5.14 Volume Control

The Volume Control function applies to the loudspeaker output only. Volume levels at the keypad are programmed individually – please see page: 16.

5.14.1 Code Stops Sound

If this function is enabled, then once an alarm has been generated (even if the code is not programmed for that area) the alarm will be silenced, and a 'Misoperation (Abort) signal' will be sent, but the area will still be set until a valid user that controls that Area is entered. ***The default is Yes.*** If disabled, the codes will only work for the programmed area.

5.14.2 E / E Keypads Only

If there is a speaker connected to the SPK output of the EURO system the entry and exit tones will be heard through the speaker. If you would like Entry and Exit tones to be heard on only the keypad and not the speaker then enable this function. ***The default is selected as No.***

5.14.3 Alert Kps Only

If this function is enabled then any Alert tones will be heard on the Keypad only and not the speaker. ***The default is selected as Yes.***

5.14.4 Silent Technical Alert

If this function is enabled then any technical alerts will be silenced. ***The default is selected as No.***

Note: 0=Completely Silent, 1=Silent,but sounds a beep when the system is set

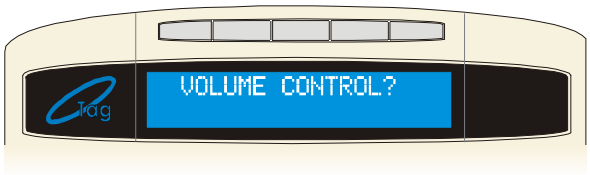
The default volume settings are as follows:

Entry:	4	**Tamper**	6
Exit	4	**Day Alarm**	6
Alarm	7	**Chime**	3
Fire	7	**Intelligent Set**	3

Volume Control

Using the [B] and [NO] keys, scroll to **'VOLUME CONTROL?'**

Press the [YES] key

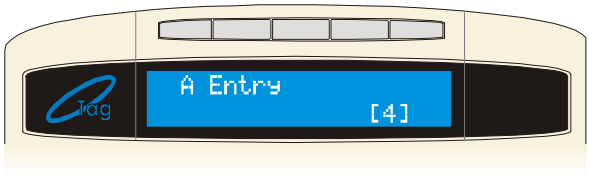


Area Volume

Use the numeric keys select the volume level required for Entry and Exit tones for each Area, once selected, press the [YES] key.

Repeat for Alarm, Fire, Tamper, Unset, Chime and Intelligent Set tones.

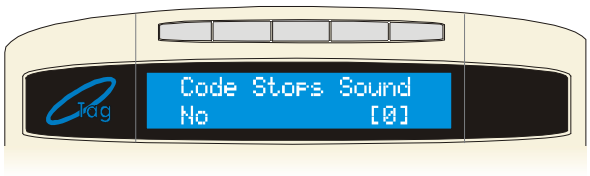
Press the [YES] key.



Code Stops Sound

Enter [0]: for **No** Enter [1]: for **Yes**

Press the [YES] key. Repeat for E/E Keypads Only and Alert Keypads Only. Press the [YES] key. You will be returned to the Engineer Menu



5.15 Alarm Response

The Alarm Response function controls how you would like certain activations to perform.

5.15.1 Silent 1st Alarm

If this function is selected as 'confirmed', then the first alarm to activated on the system will be silent, but the if another input activates (i.e. a confirmed alarm) then the alarm will activate and the alarm tones will be heard. This option is only valid once the system has been set for 3 minutes and not if the entry time has started. ***The default setting is 'Never'***

5.15.2 Disable Confirm On Entry

To comply with BS8243 clauses 6.4.3 and 6.4.4, this option should be set to YES to disable confirmation once the entry procedure has started. For use with BS8243 option 6.4.5, this option should be left at default (No).

If 'Disable Confirm On Entry' is set to **YES** this option will disable **ALL** confirmation signals on entry.

If 'Disable Confirm On Entry' is set to **NO** the confirmation signals are enabled on expiry of entry time. ***(Default)***

5.15.3 Alarm Starts / Stops (Alarm Responses)

The order of which alarm responses are activated can be programmed to your requirements. The alarm activations you can program are: Areas, Fire, Gas, Hold Ups, and Day Alarms and the different alarm responses are: Keypads, Internal Sounders, Sirens Only, Digi and Confirm. The different alarm responses work on a cycle (starting from 'Keypads' and finishing at 'Confirm').

Each alarm response will take 15 seconds before moving on to the next response.

For example, If the alarm response for Area A **starts** at '*Internal Sounders'* and **stops** at '*Digi*', then once Area A is set and an alarm has been activated, the *internal sounders* will be first to activate, then after 15 seconds the Sirens will activate (*Sirens Only*) and then after another 15 seconds the '*Digi*' will activate.

You may also program the system to operate on a combined Area basis, for example if both Areas 'A' and 'B' are set; you may want the process of the alarm responses to change. Therefore you would use the 'If Areas set' section of this function and select the desired Areas and the alarm responses.

Another example of where this function would become useful is when you have several inputs programmed as 'day alarm', you may want the system to only activate the internal sounders in unset mode, but when the system is set you may want both the internal and external sounders to activate. To do this, when you get to "Day alarm starts", enter '1' for Internal Sounders and press function. "Day alarm stops" will be displayed, as you do not wish anything else to activate when the system is unset, enter '1' for Internal Sounders again. This will make the system only ever activate the internal sounders when an alarm has activated in unset mode.

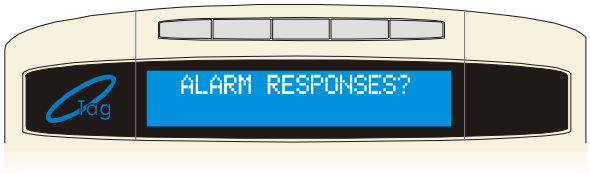
The defaults for this function are as follows:

Area Starts At	Digi	Area Stops At	Confirm
Fire, Gas	Digi	Fire, Gas	Digi
HU Starts At	Digi	HU Starts At	Confirm
Day Alarm Starts At	Sirens Only	Day Alarm Stops At	Sirens Only

Alarm Responses

Using the [B] and [NO] keys, scroll to **'ALARM RESPONSES?'**

Press the [YES] key

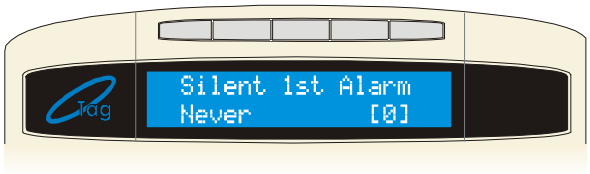


Silent 1st Alarm

Enter [0]: for **Never.**

Enter [1]: for **Confirmed.**

Press the [YES] key



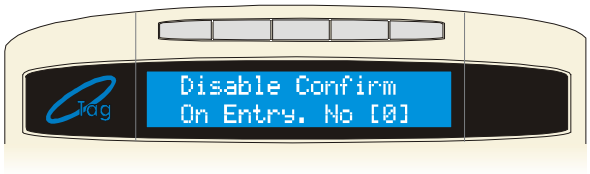
Disable Confirm On Entry

Enter [0]: for **No.**

Enter [1]: for **Yes.**

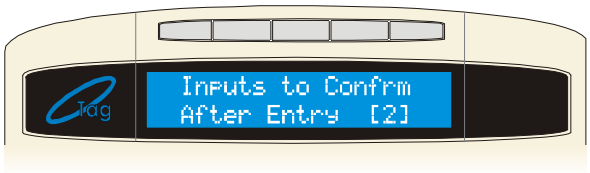
Leave as NO for use with BS8243 clause 6.4.5 or Change to YES for use with BS8243 clauses 6.4.3 / 6.44.

Press the [YES] key



Inputs to Confirm After Entry

Enter the number of inputs to Confirm after the Entry. *(Leave at 2 to comply with BS8243).* Press the [YES] key



Area Starts

Enter [0]: for **Keypads.**

Enter [1]: for **Internal Sounders.**

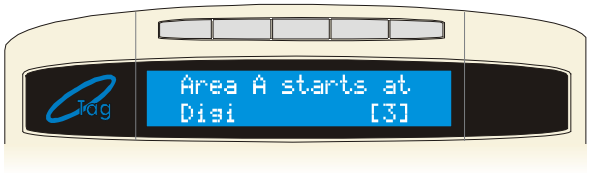
Enter [2]: for **Sirens Only.**

Enter [3]: for **Digi.**

Enter [4]: for **Confirm.**

Press the [YES] key. Repeat for *Area Stops* and then repeat the above for each other Area and also for Fire, Gas, HU and Day alarms

You will be returned to the Engineer Menu



5.16 Change Outputs

Any output type may be programmed to any of the systems outputs. Outputs must be used within their rated capacity.
NOTE: Only the ATE outputs can be inverted.

5.16.1 Output Types

Type		Active	Restore
0000	**Not Used**	(permanently off)	
0001	**Fire**	At alarm	When a valid code is entered
0002	**Hold Up Any**	At a HU or Duress alarm *(This includes keypad HU)*	When a valid code is entered
0003	**Intruder Any**	At alarm, while system is disarmed	At first valid code entry and at end of confirm time.
0004	**Final Set All**	When system is FULLY armed	At code entry to unset
0005	**Misoperation Any (Abort)**	When system is silenced after any 'intruder' output is triggered	After 2 minutes
0006	**Confirmed Any**	When further input active in any area after 'intruder' alarm	At next code entry
0007	**Tamper Any**	Any tamper alarm	At code entry to silence And at end of confirm time.
0008	**Duress**	At a Duress alarm (i.e. from a keypad)	When a valid code is entered
0009	**HU Device Any**	At alarm on a HU input only	When a valid code is entered
0010	**Gas**	At alarm	When a valid code is entered
0011	**Set Fail**	Pre-set time after start of exit time, if exit procedure is not complete	At code entry to rearm
0012	**Entry Deviation**	When deviation from entry route occurs, during entry time	At code entry to unset
0013	**Secure Intruder Any**	At alarm, after exit time started, until unset	At first valid code entry and at end of confirm time.
0014	**Siren Any**	When alarm live	When alarm silenced or when siren timer expires
0016	**Strobe Any**	When alarm live	When alarm silenced or when strobe timer expires
0017	**Omit Rearm Any**	Input omitted if active (or in alarm condition) at the end of confirmation time.	When system disarmed
0018	**Unconfirmed Any**	Any intruder or Tamper alarm	At code entry to silence
0019	**Can Set All**	If all inputs and technical faults in system are clear. Also once entry time has started	If fault exists, and after final set
0020	**Exit Starts All**	At start of exit time to set LAST area	At code entry to unset FIRST area
0021	**Exit Starts Any**	When exit time starts to set FIRST area	At code entry to unset LAST area
0022	**Final Set Any**	When FIRST area is set	At code entry to unset

Type		Active	Restore
0023	**Strobe Set Fail**	Works similar to output 016, but also fires if the set fail timer expires.	
0025	**Keyswitch unset**	This output turns on for 5 seconds when the system is disarmed via a keyswitch input (pulsed or latched)	
0026	**Set with Omit**	Activates when inputs are omitted on setting	
0028	**Power Fault**	Active during low volts and battery faults*. Restores at code entry after fault cleared.	
0029	**Confirmed Intruder Any**	When more than one intruder alarm activates	At next code entry
0030	**Confirmed Hold Up Any**	When more than one confirmed hold up activates	At next code entry
0031	**Entry**	Live during any exit time	
0032	**Exit**	Live during any entry time	
0033	**Entry/Exit**	Live during any entry or exit time	
0034	**Lights**	When exit or entry timer starts	20 seconds after set/unset procedure completed
0035	**Follow Input** *See page: 52.*	When input triggers	Dependent upon programming
0036	**Shunt Fault**	*See Shunt Inputs - Page: 31*	
0037	**Restore 1**	At code entry to set	After 3 seconds
0038	**Restore 2**	At code entry to set	When unset
		Re-triggers whenever an additional area is set	
0039	**PIR Latch 1**	When set (and in Walk Test)	At alarm, or when unset
0040	**PIR Latch 2**	This is the inverse polarity to PIR Latch 1	
0041	**Mains Good**	Output showing the mains is healthy	
0042	**Detr Indn Enable**	This output activates during walk test and also when a code is entered to view indications – staying activated for the time for which the indications are viewed.	
0043	**Follow Test**	New output for alternative bell test by activating SAB	
0044	**Off During Test**	New output for alternative bell test by activating SAB	
0048	**Detr Walk Test**	This output is active during walk test, and will only deactivate when all detectors have been tested.	
0049	**Detector Masked**	If any detector goes into 'mask' condition the output will trigger	When masking fault clears.
0050	**Follow 24 Hour**	If any input programmed as "Day alarm" activates	When input restored
0051	**Line Fault**	When Line Fault signalled by communicator	When fault clears
0052	**Mains Fail**	After pre-set time without mains power	On restoration of mains
0053	**Battery Faults**	When battery disconnected or load fail detected	At next valid code entry
0054	**Low Volts**	At fault	When fault clears
0055	**Global Fault 1** (Faults: Modem, Battery, Fuse, Line, Mains)	Activates if fault occurs only when system is armed	When all faults cleared
0056	**Global Fault 2** (Faults: as above)	Activates if fault occurs at any time	When all faults cleared
0058	**Guard Code Used**	When 'guard' code accepted	After 60 seconds
0059	**Engineer Access**	When entering Engineer Mode	Leaving Engineer Mode
0060	**Initialise Digi**	At power up	Live for 45 seconds only

Type		Active	Restore
0063	**Test ATE/GSM**	Test signalling through PSTN and GSM. Activates when a test call is sent.(only used for specific GSMs)	When test completed
0064	**Test ATS** *For use with ATE complying with BSIA Form 175 to initiate test call to ARC by each available path.*	Test signalling through PSTN and GSM. Activates when a test call is sent.	When test completed
0065	**Zone Activity Fail**	If an input with NAT timer active does not trigger in the defined period	Next valid code entry
0066	**ATE not used**	Makes the ATE pin 5V or 0V depending if ATE outputs are inverted	
0070-0079	**Fob Output 01-10**	Can be used to triggers outputs via the keyfob. For example if an output is programmed as type 0071 (Fob Output 02) and is wired to a garage door. And if a user has a keyfob programmed with button 2 as Latched or Keyswitch Output (with Output 2 selected), then when the button is pressed the garage door will open.	

0070-0079 Fob Output 01-10		
A repeating block of output types should be noted:		
0202	**Hold Up A**	As 0002 for Area A / Level set A events only
0203	**Intruder A**	As 0003 for Area A / Level set A events only
0204	**Final Set A**	As 0004 for Area A / Level set A events only
0206	**Confirmed A**	As 0006 for Area A / Level set A events only
0207	**Tamper A**	As 0007 for Area A / Level set A events only
0208	**Duress A**	As 0008 for Area A / Level set A events only
0209	**HU Device A**	As 0009 for Area A / Level set A events only
0210	**Fire Reset A**	As 0010 for Area A / Level set A events only
0213	**Secure Intruder A**	As 0013 for Area A / Level set A events only
0214	**Siren A**	As 0014 for Area A / Level set A events only
0216	**Strobe A**	As 0016 for Area A / Level set A events only
0217	**Omit At Rearm A**	As 0017 for Area A / Level set A events only
0218	**Unconfirmed A**	As 0018 for Area A / Level set A events only
0219	**Can Set A**	As 0019 for Area A / Level set A events only
0220	**Exit Starts A**	As 0020 for Area A / Level set A events only

Then this pattern repeats for each other area, so that:	
0221-0240 Area / Level set B	**0361-0380** Area / Level set 4
0241-0260 Area / Level set C	**0381-0400** Area / Level set 5
0261-0280 Area / Level set D	**0401-0420** Area / Level set 6
0281-0300 Area / Level set 0	**0421-0440** Area / Level set 7
0301-0320 Area / Level set 1	**0441-0460** Area / Level set 8
0321-0340 Area / Level set 2	**0461-0480** Area / Level set 9
0341-0360 Area / Level set 3	

1xxx	**Follow input xxx**	When input is activated	When input clears

i.e. add 1000 to the input number to select output required	
Area Sounder	**At output 2 of the TMZ (fixed as loudspeaker)**

At Default

Output 1: Not Used, Output 2: Not Used, Output 3: Strobe Any (0016), Output 4: Siren Any (0014)

5.16.2 STU / ATE Pin Output (Defaults)

Any communicating device with the industry standard footprint may be plugged onto the ATE pins on the EURO plus ATE Utility PCB. The default types for the footprint are as follows:
(For the diagram of the communication loom please page: 103):

ATE OUPUTS	EURO 46/76/162/280
1 (Blue)	Fire (0001)
2 (Orange)	HU Device Any (0009)
3 (Yellow)	Unconfirmed Any (0018)
4 (Brown)	Final Set All (0004)
5 (Purple)	Tamper Any (0007)
6 (Green)	Omit Rearm Any (0017)
7 (Black)	Confirmed Any (0006)
8 (Purple)	Mains Fail (0052)
9 (White)	Global Fault 2 (0056)
10 (Light Grey)	Test ATS (0064)

NOTE: There is an "Invert ATE outputs" option for use with positive removed/applied signalling Please see 'Site Options, page 54.

These are programmed in 'Change Outputs' under 'Endstation Output'.

For programming of the onboard Digi channels please see page: 67

5.16.3 External Reader Output

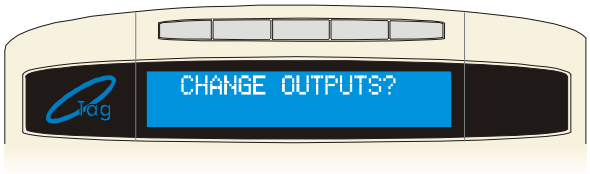
The RED LED on the external reader can be programmed so that it follows an output.

To achieve this, go to '**CHANGE OUTPUTS**' and then 'Reader Output' and program the first output to whichever type is required. For example you may want the Prox to show the system setting, therefore you can use the output "0021 Exit Starts All". The RED LED will then be illuminated once Area A has set.

Change Outputs

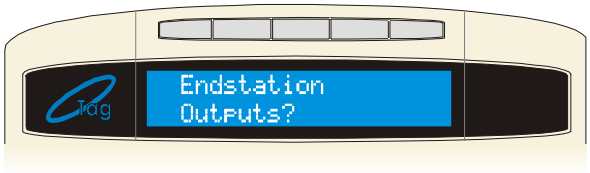
Using the [B] and [NO] keys, scroll to **'CHANGE OUTPUTS?'**

Press the [YES] key



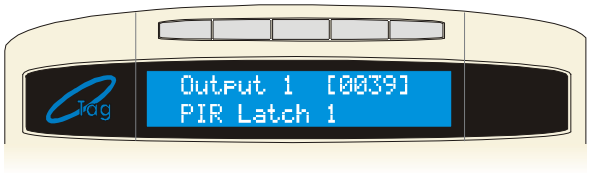
Endstation Outputs

To program the control panel outputs and the ATE pins press the [YES] key.



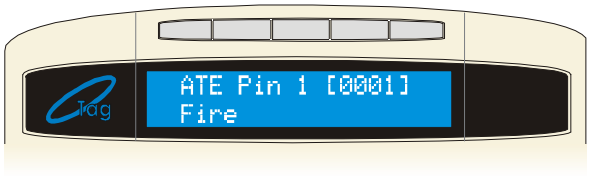
OUTPUT

Select the output type for the Output and press the [YES] key. Repeat for each output.



ATE PINS

When the display shows "ATE pin" you can decide what you would like the STU / ATE pins to be programmed as. Select the output type for the ATE pin and press the [YES] key. Repeat for each pin.

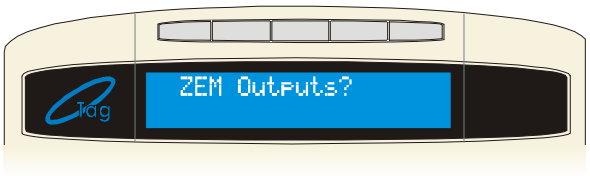


ZEM Ouputs?

Once you return to the sub-menu 'Endstation Output' press the NO key, the display will show 'ZEM output's', press the YES key.

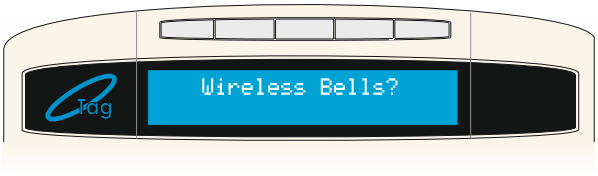
Enter the address of the ZEM. Press the YES key.

Select the output type for the Output and press the YES key. Repeat for each output (and ZEM address once you have pressed the NO key)



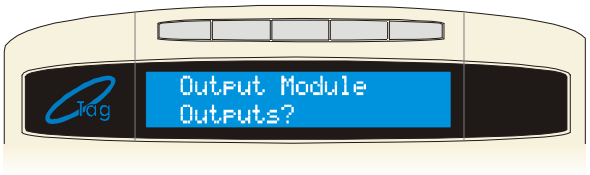
Wireless Bells

If any wireless bells are learnt on the system. 2 outputs may be programmed (defaulted to bell and strobe). Press the YES key for this, or press the NO key for the next option.



Output Module

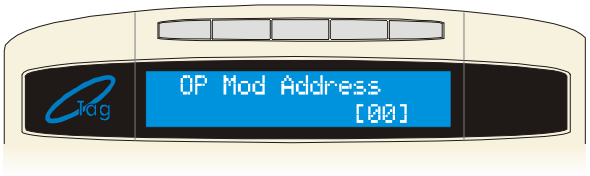
Once you return to the sub-menu 'ZEM Output' press the NO key, the display will show 'Output module', press the YES key if you have an Output module installed.



OP Mod Address?

Select the address of the Output Module and press the YES key

Select the output type for the Output and press the YES key. Repeat for each output (and ZEM address once you have pressed the NO key)

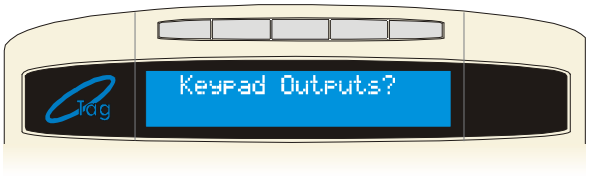


Keypad Output?

Repeat for the Keypad Output. Press the NO key

Repeat for the Reader Output. Press the NO key

You will be returned to the Engineer Menu.



5.16.4 The 'Follow Input' Output*

If the expander card is installed the output 'Follow Input' is made available. This output provides the following functionality:

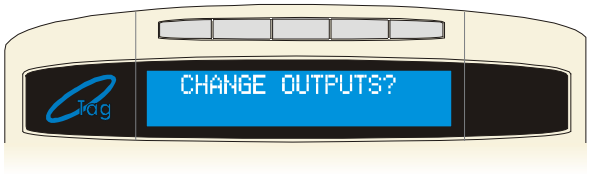
- Follow (whilst input active), TIMED or LATCHED output
- Follow individual INPUT, AREA, WARD or SHUNT LIST
- Follow WHEN SET, WHEN UNSET or ALWAYS

NOTE: The Follow Input type WILL NOT function correctly if assigned to ATE pins.

Change Outputs

Using the [B] and [NO] keys, scroll to **'CHANGE OUTPUTS?'**

Press the [YES] key

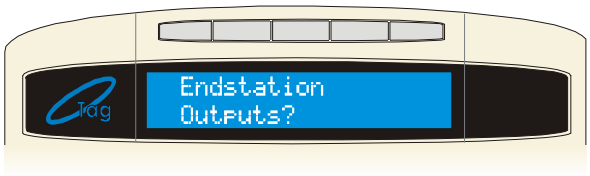


Endstation Output

To program the control panel Output and the STU/ATE pins press the [YES] key.

Select the output you desire, and select the output type as '0035' = Follow Input.

Press the [YES] key.



Follow Type?

Enter [0]: for **Follow *(Default)***

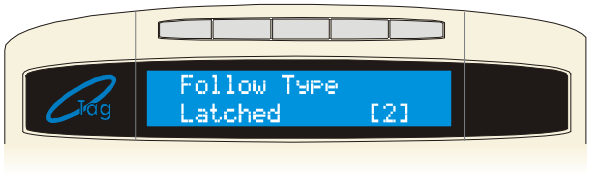
Enter [1]: for **Timed**

(You will need to enter the time you would like the output to be activated for - in seconds)

Enter [2] for **Latched.**

Enter [3] for **Code Reset.**

Press the [YES] key.



Follow What?

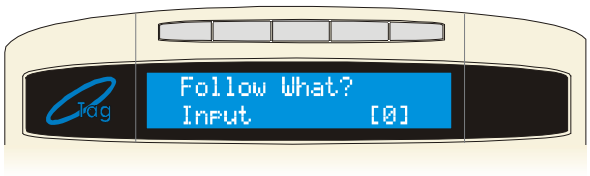
Enter [0]: for **Input *(Default)***

Enter [1]: for **Shunt List**

Enter [2]: for **Ward**

Enter [3]: for **Area**

Press the [YES] key.



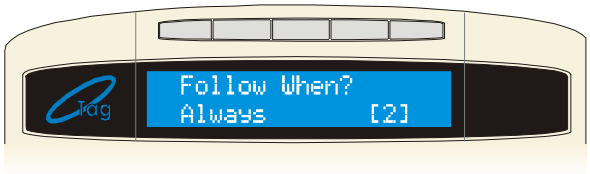
Follow When?

Enter [0]: for **When Set**

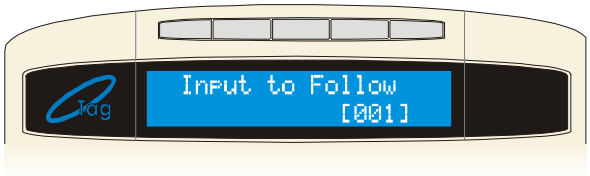
Enter [1]: for **When Unset**

Enter [2]: for **Always *(Default)***

Press the [YES] key.



Enter the input you wish to follow (if you chose: 'Follow What': Input) or the corresponding option you selected.



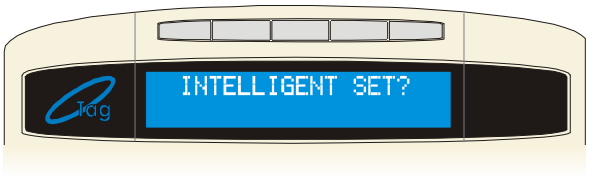
5.17 Intelligent Set

The EURO system allows the facility where you can automatically initiate a different Set mode or Area when you activate an input in a certain area (rather than having to choose a different Set mode via the keypad). This is known as "Intelligent Setting".
Please note that when Intelligent Setting has been enabled the exit tone will commence at 'intelligent' volume. See Change Volume on page 45. When intelligent set is enabled, then level set B will start to set (if the user code is enabled in level set B). Then if a Final Exit input is activated which is programmed in level set A during the exit time, then the EURO will automatically 'quick set' in level set A.

Intelligent Set

Using the [B] and [NO] keys, scroll to **'INTELLIGENT SET?'**

Press the [YES] key

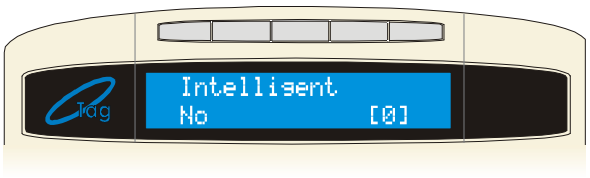


Intelligent

Enter [0]: for **No (*Default*)**

Enter [1]: for **Yes**

Press the [YES] key.



5.18 Site Options

A full range of site options is available to tailor the operation of the system.

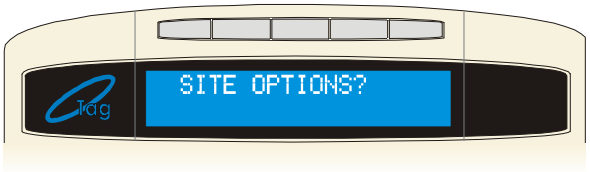
5.18.1 Site Option Types

Option	Default	Function
Set With Fault	Yes	If '**YES'**: Allows setting with the following faults active: Device fail, Mains fail, Battery faults, Fuse faults, SMS failure, relay sirens 1&2, relay Strobe faults.
Set With Tamper+	No	If '**YES'**: Allows setting with the following faults active: Case tamper and System tampers.
Set With ATS Fault	Yes	If '**YES'**: Allows setting with the following faults active: Telecom line fail, Modem failed, STU/ATE line fault, STU/ATE one path fail, Digi dial fail, STU/ATE comms fail.
Set With Ward TFault	Yes	If '**YES'**: Allows a ward to be set if mains, battery, telecom line, or other system fault is present.
Set Fail = Alarm	No	If '**YES'** = A graduated alarm will be generated when 'Set Fail' timer expires (see Change Timers), if exit procedure is still incomplete. Set fail output will trigger. If '**NO'** = Exit time will continue until the Exit route is clear.
Do Bat Load Test	No	If '**YES'**: Programmes the system to perform a full load test of the battery at 7.00am each day.
Ward Misoperation	No	If '**YES'** Allows a Misoperation (Abort) signal to be generated without the entry of a valid code into the system when a ward is operated after an alarm.
Strobe/Squawk at set	No	If '**STROBE'**: A 'STROBE ANY' output will be activated for 5 seconds as the system arms. If '**SQUAWK'**: A 'SIREN ANY' output will be activated for 5 seconds as the system arms. If '**BOTH**' then both of the above will activate for 5 seconds as the system arms. *Use with care, in view of potential security risk.*
Re-Arm Omits	No	If '**YES'**: At rearm at the end of the confirmation time, this function will force an input (not a system tamper) causing an unconfirmed alarm to be omitted, whether it's still in fault or not.

Use Level Set	No	If '**YES'**: The system becomes a 'level set' (Having one area set only at any one time, e.g. part sets). If '**NO'**: The system becomes a 'area' system (setting more than once area at a time)
Confirmed When	Final Set	**Final Set**: Confirmed signal only available after the system is set. **Exit Starts:** Confirmed signal available after the exit time has started. *NOTE: Not compliant with BS8243.* Note: 'Exit Starts' must be selected in order for it to be entered in the logs.
AutoSet Force	No	If '**YES'** when autoset is in use (this is only available in the plus software) the panel will still set even if an input is open at the time.
Restrict PIN Use	No	If '**YES'** the system prevents a pin code being entered on the Entry Time, but allows the system to be silenced once in alarm. *Enable when BS8243 option 6.4.5 is in use.*
Simple Set	No	Enables the 'simple set' functionality which allows a user to set the system by pressing the 'YES' key and the level set. PLEASE NOTE THIS FEATURE IS NOT UK COMPLIANT
Invert ATE O/Ps	Yes	If '**YES'**: 'Positive Removed' If '**NO'**: 'Positive Applied'
Common Lobby	Yes	If set to '**YES'**, this will automatically select the 'highest' exit mode for all partitions. (0 = Timed, 1 = Final Door, 2 = Timed/Final Door, 3 = PTS). For example, if Area C is selected as Final Door and the rest of the partitions are selected as Timed, then because Final Door is 'higher' than Timed (Final door is 1 and Timed is 0), all partitions will be set to Final Door. If set to '**NO'** the Exit Modes will be individually programmable to each area.
Flexi Unset	No	If set to '**YES'**, this will allow all codes with Flexi-Set attribute enabled to pick and choose which partitions to set/unset during entry time. *This option should always be selected when BS8243 option 6.4.5 is in use*
2 Key HU	None	2 Key Hold Up Alarm at the keypad. The 1 and 7 keys, pressed simultaneously to produce a hold up. **None:** Inactive. **Silent:** Silent Hold Up. **Bells Only**: Bells Only (No signalling). **Both:** (Signalling and Bells) EURO keypads do not comply with ACPO requirements for this facility to be used for police calls.
Extl ATE Inputs	None	Permits selection of inputs to ATE pins to suit 'ATE' (including Red Care Reset), 'DigiCom' (including Telback), 'Relay Interface Monitoring' or 'Not Used'. *Note: This option must be set to 'ATE' or 'Digi' in order for Line Fault, etc. monitoring to function. This option is NOT required for use with the digi-modem.*
Tag Opens Doors	No	Used in conjunction with "Entry Control" in Assign Keypads/Readers (Page:33). If set to 'No' – any reader assigned for 'entry control' will arm/disarm as normal, and any doors on the system are open when the system is unset. If set 'Yes' the readers control the arming/disarming and doors.
Set with Polling Fault	No	If '**YES**' the system will set regardless if there is a wireless 'polling' fault or not (a wireless device can no longer communicate with the wireless expander).
Fob Unset Entry	No	If '**YES'** allows the use of the wireless keyfob to unset the system. If this is '**NO**', a wireless keyfob will only set it.
Wireless Bell Supervision	Yes	If '**YES**' then the wireless bell will go into alarm if it can no longer communicate with the Wireless Expander.
Download if Set	No	If '**YES**' then upload/downloading will be possible regardless if the panel is set or unset.

Site Options

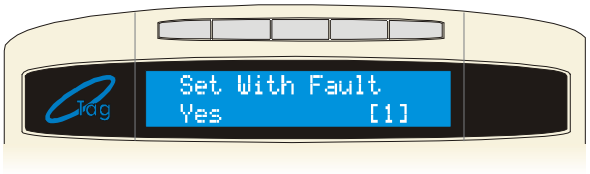
Using the [B] and [NO] keys, scroll to **'SITE OPTIONS'**. Press the [YES] key



Set With Fault

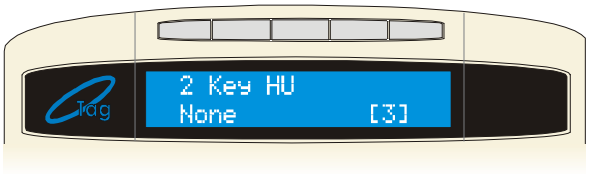
Enter [0]: for **No.** Enter [1]: for **Yes.**

Press the [YES] key. Repeat for all other options until:



2 Key HU

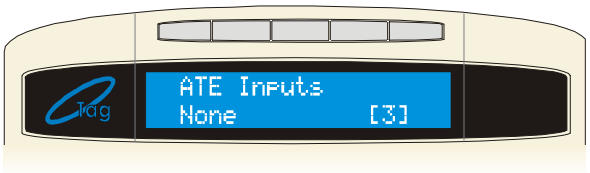
Enter [0]: for **Silent.** Enter [1]: for **Sirens Only** Enter [2]: for **Both.** Enter [3]: for **None.** Press the [YES] key.



ATE Inputs

Enter [0]: for **ATE.** Enter [1]: for **Digi**

Enter [2]: for **Relay.** Enter [3]: for **None.** Press [YES] for the Engineer Menu.



5.19 Engineer Reset Options

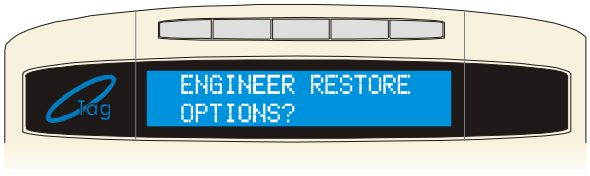
The Engineer Reset Options are used so that once an alarm has occurred; the EURO system can only be reset by an engineer code, anti code or red care reset from the alarm receiving centre.

Option	Function
Engineer Restore of Intruder	Following an intruder alarm, an engineer must reset the system before it can be used again. Please select 'UK Intruder' to enable this, 'Secure Intruder' should not be used. This will not interfere with the generation of an emergency alarm. ***Default = No.***
Engineer Restore of HU	Following a Hold Up, Input HU or Duress alarm, an engineer must reset the system before it can be used again. This will not interfere with the generation of a Fire or Gas (emergency) alarm. ***Default = No.***
Engineer Restore of Tamper	Following a Tamper alarm, an engineer must reset the system before it can be used again. This will not interfere with the generation of an emergency alarm. ***Default = Yes.***
Engineer Restore of Soak	In the event of an input with the 'soak' attribute triggering whilst the system is set, the system must be reset by an engineer before it can be used again. This will not interfere with the generation of an emergency alarm. ***Default = No.***
Engineer Restore of Confirmed	Following a confirmed alarm, an engineer must reset the system before it can be used again. ***Default = No.***
Engineer Restore of Faults	If selected, only an engineers code will be able to reset the following faults: ATE telecom fail, Modem fail, ATE single path fail, Telecom line fail, Battery disconnect, Batt charge, Batt load, Excessive charge, Battery critical, Device fail. ***Default = No.***
Anti Code Restore	Enables the system to display an anti-code whilst awaiting an Engineer reset, which can be used to generate a special reset code. ***Default = No.***

Engineer Restore Options

Using the [B] and [NO] keys, scroll to **'ENGINEER RESTORE OPTIONS?'**

Press the [YES] key



Eng Restore Int

Enter [0]: for **No**

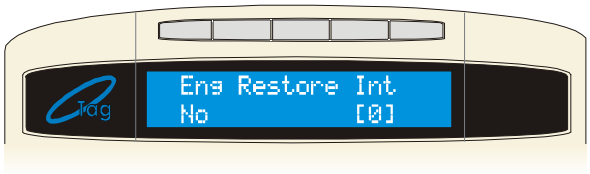
Enter [1]: for **UK Intruder**

Press the [YES] key.

Repeat the above options for the restores: Tamper, Soak, Confirmed, and Faults

(Enter [0]: for **No,** [1]: for **Yes**)

Press the [YES] key.



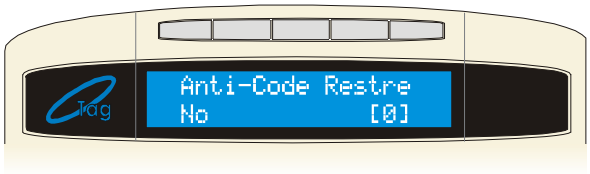
Anti Code Restore

Enter [0]: for **No**

Enter [1]: for **Yes**

Please note that if Anti-Code is selected, this will coincide with the options you have selected previously. For example, if 'Engineer Restore Inturder' is selected, and Anti-Code is selected, then an anti-code will be produced on an Intruder activation.

You will be returned to the Engineer Menu.



5.20 Review Logs

There are two logs available on the EURO system:

- **The Panel Log:** Includes all Set, Unset and Alarm events. The code holder performing any operation may be identified by pressing the [C] key. The panel log also includes all system faults, details of engineer access etc.
- **The Access Log:** Includes all Access Control and Guard Tour events.

With each log, use the [D] key to move from one event to the previous event. The [B] key will move from one event to the next event that occurred.

To view additional details, press the [C] key. If no other information is available, the display will move to the next log entry. Pressing the [A] key will toggle between the sub logs of a main log entry.

Information on all fault codes that appear in the log can be seen on page: 136.

5.20.1 Log Entries

EURO 46: 750(M), 250(A), 250(O)	EURO 162: 1000(M), 500(A), 500(O)
EURO 76: 1000(M), 500(A), 500(O)	EURO 280: 1000(M), 500(A), 600(O)

5.20.2 Code Identification

The codes that are entered into the EURO system are identified as follows:

Code	Identity
Engineer Code Default 1111	Engineer
Master Manager Code Default 2222	Master Manager
User (Or Manager), Default 1234	Users programmed through the Master Manager menu.
Duress (or Guard)	Codes programmed through the Engineer Menu.
"Input Switched"	Key or other switch used through an input

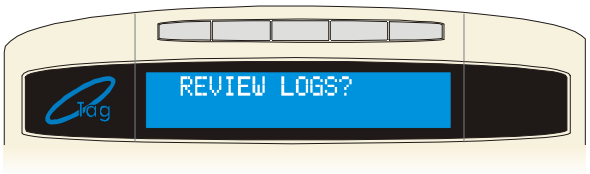
5.20.3 Fault Codes

Please note a list of all the fault codes and log meanings are shown on page: 136

Review Logs

Using the [B] and [NO] keys, scroll to **'REVIEW LOGS?'**

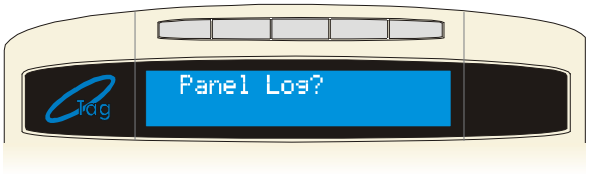
Press the [YES] key



Panel Log

Press the [YES] key to view the panel log.

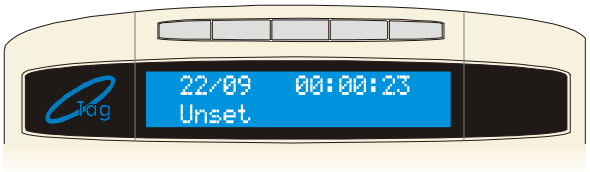
You will be returned to the Engineer Menu.



The log will be displayed. Use the [B] and [D] keys to scroll through the log.

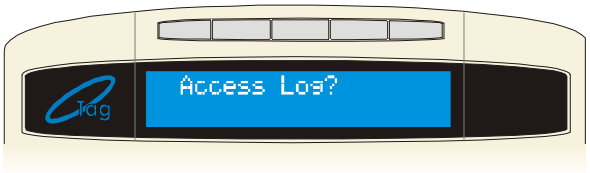
For more information on an event (such as alarm silenced for example) press the [C] key.

When you wish to exit, press the [NO] key.



Access Log

Repeat the above for the Access log. When you wish to exit, press the [NO] key. You will be returned to the Engineer Menu.



5.21 Engineer Tests

The Test function allows the engineer to test inputs, outputs, batteries and the siren.

5.21.1 Sounds To Play

This function allows you to listen to the different tones the EURO system makes. They have a choice of: Chime, Chime Follow, Exit, Exit Fault, Entry, Tech Fault, Tamper, Alarm, PA, and Fire.

5.21.2 Walk Test

Please note that the walk test feature can only be used when engineer mode is exited after the programming of inputs. This function allows the engineer to test all programmed inputs on the system. The inputs that haven't been activated will be shown on the display. Once all the

inputs have been walk tested, 'Walk Test Completed' will be displayed. When walk-testing a double-knock detector, it must be triggered twice within the preset period. When testing dual-trip detectors you must first open detector one and then trigger the second detector; next open the second detector and trigger the first detector.

5.21.3 Soak Control

Any input may be placed on 'soak test' to prevent it from generating an alarm. If the input triggers whilst the system is set, it will indicate the activation and enter the details in the system log. You can also enter the number of days you would like the soak test to last, after this period the inputs will be active.

5.21.4 Test Siren

Any outputs programmed with a siren or strobe configuration will be activated.

5.21.5 Do Battery Load Test

Battery Test

The system performs a check of the battery operation every 10 seconds, by dipping the power supply voltage momentarily, and measuring the system voltage. If the battery voltage measured is below 12.0V, or the battery fuse has failed, a 'BATTERY FAULT 100' warning will be generated.

Battery Load Test

EURO Systems may be programmed to perform an automatic battery load test at every power supply at 7.00am each day. This will drop the power supply voltage below the battery voltage, whilst monitoring the system diagnostics. The test will NOT take place if:

- The End Station siren and strobe Output are live
- The system is in Engineer Mode
- Any battery faults exists
- Any mains fault exists
- The site option is not selected

If the test has already started, it will be aborted if any of these conditions apply, other than entry into Engineer Mode. If the test is aborted, it will NOT be performed until the next day. This is selected in SITE OPTIONS under "Do Battery Load Test". The test may also be performed as required, under engineer control.

5.21.6 Test Outputs

The engineer can test all the Programmable Outputs on the End Station and the output module. This test can also be used to test the STU/ATE pins, all you need to do is select the output types you have chosen for the pins and test them, the signal will be then sent out on both the programmable outputs and the STU/ATE pins.

5.21.7 Test Alarm Data Communications

If the engineer is using SIA or Contact ID to signal events, this function can be used to send a test signal to the alarm receiving centre.

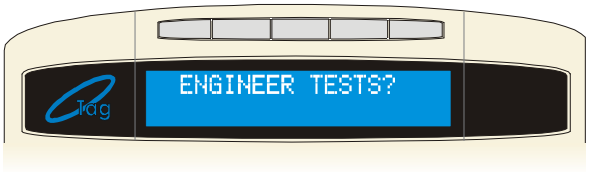
5.21.8 Start CHC SMS Update

If the engineer has set up SMS text messaging then this function needs to be used (after enabling SMS calls in 'Set up Digi/SMS', you must exit the engineers mode to save all the data, and then you may enter this function (this function is also in the master manager menu).

The system will automatically carry out a test call to our Host Computer every two weeks. The call is made via a premium rate number and the bill payer should be informed of the charge (50p per call). Customers who have "BT Answer 1571" enabled may have difficulty in connecting to the CHC. ***This must be used in order for SMS to be enabled.***

Engineer Tests

Using the [B] and [NO] keys, scroll to **'ENGINEER TESTS?'** Press the [YES] key



Sound To Play

Press the [D] key to select which sound you would like to hear. Press the [YES] key.

Walk Test

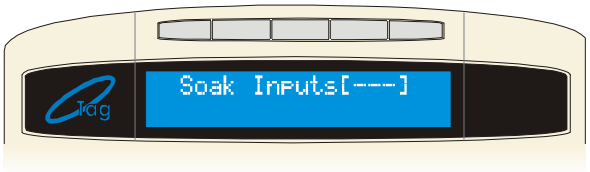
Press the [YES] key to enter Walk Test.

Select the Areas to be tested. Press the [YES] key. The display will scroll through all the inputs not yet tested. Walk test each input. As each input is triggered, a chime will sound and that input will disappear from the scrolling list. Press the [YES] key. Once the last remaining input has been tested, the following screen appears. Press the [YES] key. 'Walk Test Complete' will be display, press the [NO] key.

Soak Control?

To enter the Soak Control press the [YES] key

Enter the number of the inputs you wish to soak test and press [YES]. The input number shows on the scrolling list. Repeat for each input to be tested. To remove an input from the list, enter its number again. Press [NO]



Soak Days Left

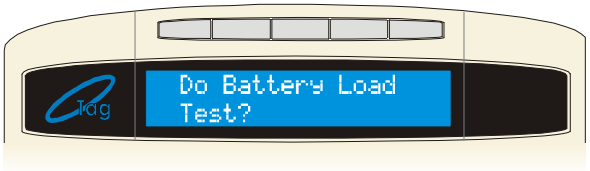
Enter the number of days the soak test will last. Press the [YES] key.

Test Siren?

To Test the Siren press the [YES] key.
All outputs programmed as either Siren or Strobe will be tested. 'Testing Siren' will be displayed. Press the [NO] key to stop the test. 'Test Siren' will be displayed, press the [NO] key.

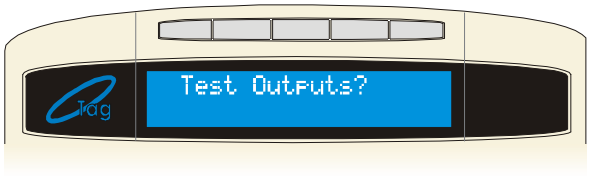
Do Battery Load Test?

To perform a Battery Load Test, press the [YES] key. The Battery Load test will be started. Once the Battery test has completed, press the [YES] key, 'Do Battery Load Test' will be displayed, press [NO] key.



Test Outputs?

This tests all the outputs on the control panel (including outputs on ZEMs, Output Modules, and ATE pins) To test the outputs press the YES key. Select the Output type you would like to test (see page 48 for the output types) and press the YES key.



All outputs programmed as the type selected will be active. Press the NO key. The outputs will switch off. Repeat for other output types as required. Press the NO key. 'Test outputs' will be displayed. Press the NO key. You will be returned to the Engineer Menu.

Test CHC Communications

If you are using SMS, you need to send a test signal to the Castle Host Computer. Press YES. 'Test Complete' will be displayed after a couple of minutes. Press NO

Test SIA/CID Communications

If you would like to test SIA or Contact ID communications, press YES and a test signal will be sent to the ARC. Press NO

5.22 Diagnostics

The system diagnostics are available for all parts of the system, including any remote power supplies if fitted.

The diagnostic resolution is:

- Voltage: 0.1V
- Current: 0.01A

The diagnostics that can be viewed are:

System voltage and current at the control panel and at each individual power supply.

System voltage at each keypad / tag reader.

Battery condition and charge current at control panel or any remote power supply.

Display inputs – current state of all inputs connected to a single system component, displayed in real time.

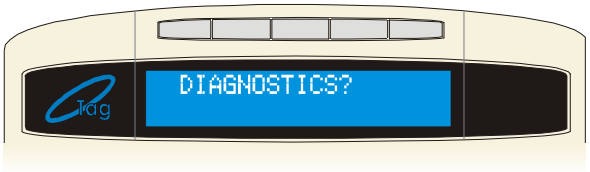
Calibration – permits calibration of control panel PSU voltage, using a calibrated meter.

View Wireless Device Status – If a wireless expander is installed on the Euro (and wireless devices are learnt), this section will show the Signal Strength of Inputs/Bells, Wireless Battery of Inputs/Bells.

Diagnostics

Using the [B] and [NO] keys, scroll to **'DIAGNOSTICS?'**

Press the [YES] key



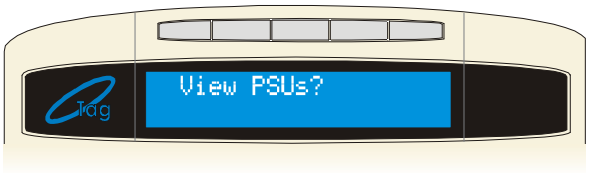
View PSU's

To view the diagnostics of the power supplies on each device press the [YES] key.

The Endstation PSU statistics will be displayed. Press the [YES] key.

Enter the address of the ZEM you wish to view. Repeat for each ZEM. Press the [YES] key. Repeat for the output modules, Keypads and Readers you have on the system

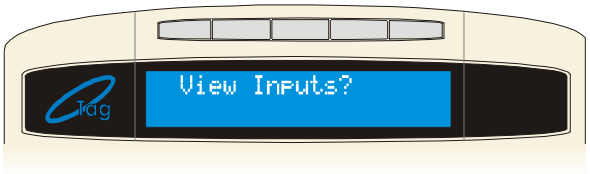
press the [YES] key, then press [NO] for the next item.



View Inputs

To view the diagnostics of the inputs on the system press the [YES] key.

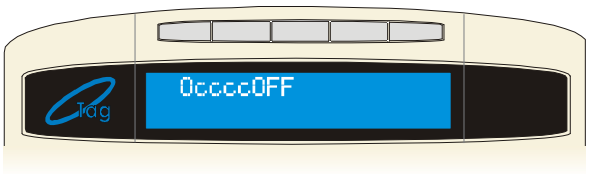
To view the Endstation Inputs only, press the [YES] key.



The status of the inputs will be shown.

C = Closed. O = Open. F = Fault (Tamper)

Press the [YES] key again to view the resistance readings.



The circuit resistance will be shown on any on the inputs you choose (enter the input number).

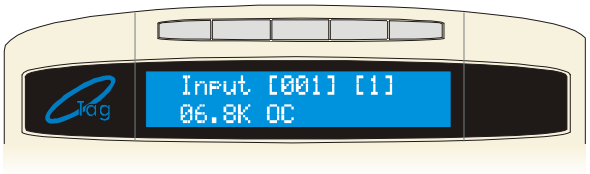
OC: Open Circuit, **CC**: Closed Circuit

DF: Detector Fault, **DM**: Detector Masked

DT: Detector Tamper

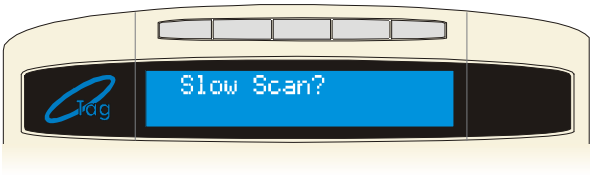
Press the [NO] key and you may view the same for each ZEM, Keypad or Reader. You will then be sent back to 'View Inputs'.

Press the [YES] key to do a Slow Scan if using iD biscuits. Or Press the [NO] key for Calibration



Slow Scan For iD

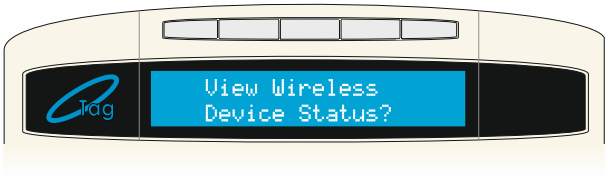
On the Slow Scan the system ceases normal iD scanning to permit the 'reset' voltage on the iD line to be measured with a standard meter.



View Wireless Device Status

To view the wireless device status for each wireless peripheral installed.

EURO-ZEM32-WE only

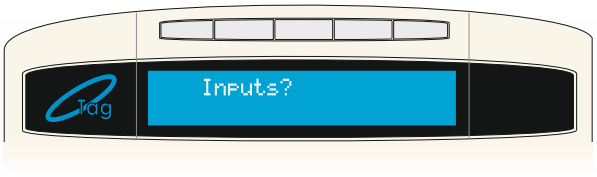


Signal Strength

Press the [YES] key to view the signal strength of the wireless devices.

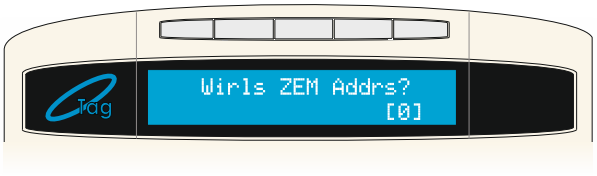
Inputs

Press the [YES] key to view the inputs or press [NO] for to view the bells.



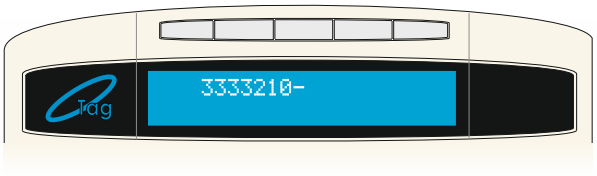
Wireless ZEM Address

Use the [B] and [D] keys to select the wireless ZEM address (each contains 8 wireless inputs) and press [YES].

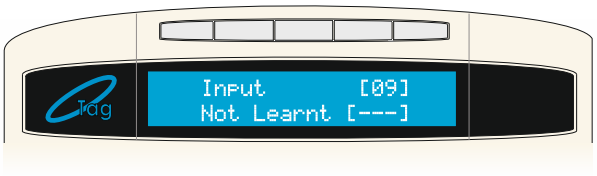


'Please wait' will be displayed while the system gathers the wireless information. Press the [YES] key to exit this display.

3 = Excellent
2 = Good install position
1 = Weak install position (reposition and retest)
0 = Missing (reposition and retest)
? = Waiting for information
Press the [YES] key for more information

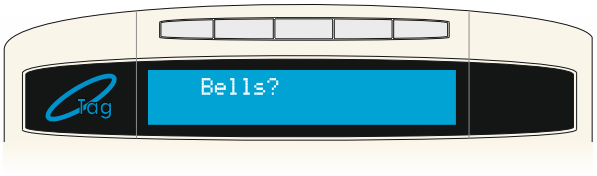


Excellent [50-100] = OK to Install
Good [30-49] = OK to Install
Weak [10-29] = Weak installation position
Weak [0-10] = Bad installation position (reposition and retest)
Missing [-] = Bad installation position, (reposition and retest)
Press the [YES] key.

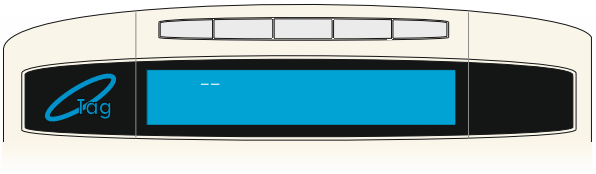


Bells

Press the [YES] key to view the bells or press [NO] for Calibration.

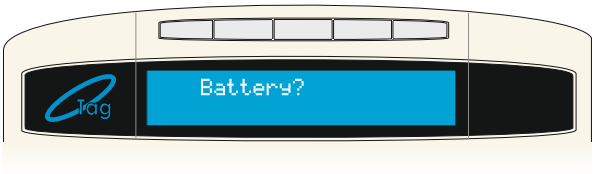


3 = Excellent
2 = Good install position
1 = Weak install position (reposition and retest)
0 = Missing (reposition and retest)
? = Waiting for information
Press the [YES] key for more information as previous with the inputs.



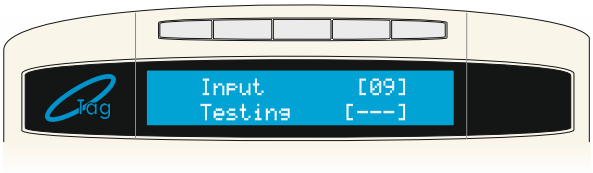
Battery

Press the [YES] key to view the battery strength of the wireless devices.

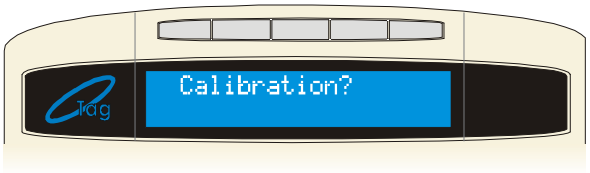


Inputs and Bells

Follow the same procedure as the signal strength steps mentioned previously. The battery levels shown on the display will be as follows:
Good = At least 1 month of battery life remaining
Replace = Battery will need replacing immediately
Testing = Waiting for the battery result
Each input and bell is tested every 15 seconds.



If you would like to calibrate the iD reset and PSU voltage of the EURO system, Press the [YES] key and enter [2] [0] [0] [0].



The iD Reset voltage may be adjusted using the [B] and [D] keys. (This can be checked on the terminals E3 and E4).

To calibrate, disconnect all iD wiring from endstation terminals, and place a calibrated digital volt meter across E3 and E4. The voltage should be 3.5V.

Press the [YES] key

Repeat the process for the PSU voltage if desired. This can be checked on the auxiliary and battery terminals.

To calibrate, place a calibrated digital volt meter across the auxiliary's and battery terminals. The voltage should be 13.7V.

Press the [NO] key twice, you will be returned to the engineer menu.

5.23 Set Up Downloading

The EURO system have uploading and downloading capability. The EURO UDL Software allow you to monitor the status of each input, alter programming, and review the logs.

There are two way that the panel communicates with the PC, one is remotely; via the telephone line (thus you will require the digi modem card and the other is directly; by using an RS232 lead which connects onto the EURO expander card.

5.23.1 Download By

Select either RS232 (direct connection) or Modem (remote dial in connection).

5.23.2 Security Mode

This function allows you to choose a range of dialling modes that can be used:

Security Mode: ***To comply with DD263:2010:*** This function is now defaulted for 'Dial Back'
When creating a customer in InSite, it is important that the control panel site telephone number is programmed. It is also important that the InSite modem telephone number is programmed in PC1 of the downloading menu at the control panel. When dialling a control panel click the Dial Customer option in InSite and the PC will call the control panel, once the control panel has answered, the panel and InSite will hang up. After a few seconds the control panel will call the PC modem and InSite, from here an upload or download may take place.

Auto Answer: permits the PC to dial into the panel.

Panel Dials: does not allow the PC to dial into the panel at all. All modes allow the panel to dial the PC without restriction. At any time, the panel can be forced to dial the PC by entering the Manager menu and selecting the Dial Out Menu. Please see page 74.

Roving Dial: This option (when disabled) prevents anyone dialling into the panel using roving dial from the InSite software. It is possible to do a roving dial to a control panel, when the control panel is in its default state. To comply with DD263:2010 this option must be defaulted to disabled.

5.23.3 Telephone Line

Dedication Line: When the PC dials the panel, it will respond immediately.

Shared Line: When the PC dials the panel, it will hang up after the second ring, and dial again. The first call primes the panel, which will then answer the second call.

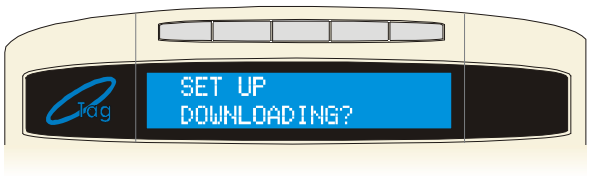
5.23.4 ARM / Modem Telephone Number

To be used in conjunction with the **'DIAL OUT MENU'** function (see page: 74), these are programmed for the appropriate PC.

Set up Downloading

Using the [B] and [NO] keys, scroll to **'SET UP DOWNLOADING?'**

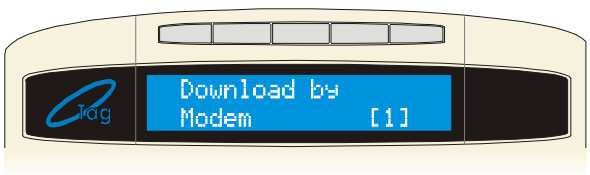
Press the [YES] key



Download By

Enter [0]: for None. Enter [1]: for Modem

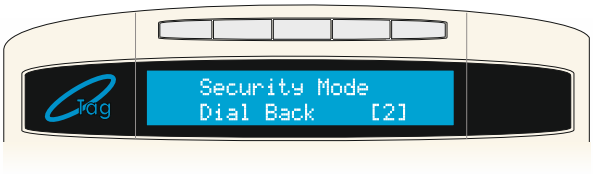
Enter [2]: for RS232. Press the [YES] key.



Security Mode

Enter [0]: for Auto Answer. Enter [1]: for Panel Dials. Enter [2]: for Dial Back (Default)

Press the [YES] key.

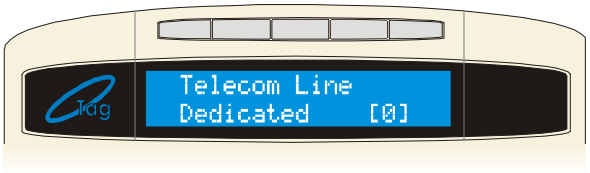


Telecom Line

Enter [0]: for Dedicated

Enter [1]: for Shared

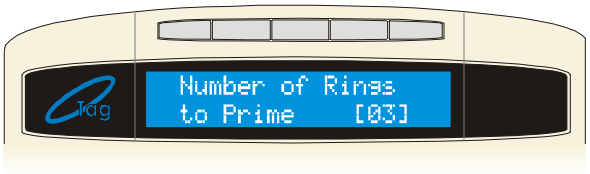
Press the [YES] key.



Number of Rings To Prime

Only available if 'Modem' has been selected and shared line option used.

Enter the number of rings needed to prime the panel to answer the next call (1-15).
Press the [YES] key.



Roving Dial

This option (when disabled) prevents anyone dialling into the panel using roving dial on the InSite software.

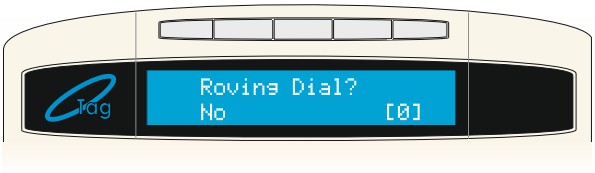
Enter [0]: for No

Enter [1]: for Yes

Press the [YES] key.

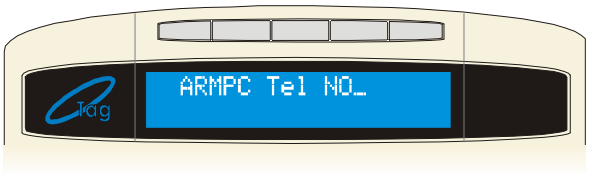
Modem Speed will be displayed.

DO NOT ALTER THIS SETTING



Enter the Prefix Telephone number if required (e.g. "9") and ARM PC telephone number.

Press the [YES] key.

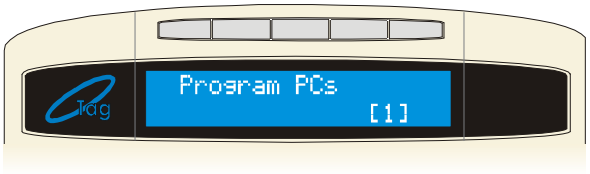


Program PCs

Select the PC that will be used for programming (up to four may be chosen)

Press the [YES] key.

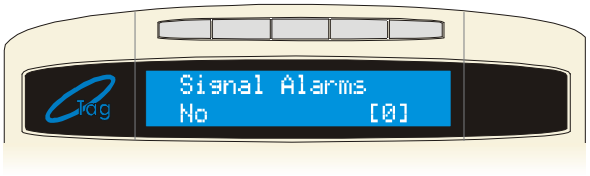
'Modem Tel No' will be displayed, Enter the telephone number of the PC that the panel will communicate with, this is used in conjunction with the function Dial Out Menu – see page 74



Signal Alarms

Enter [0]: for No

Enter [1]: for Yes

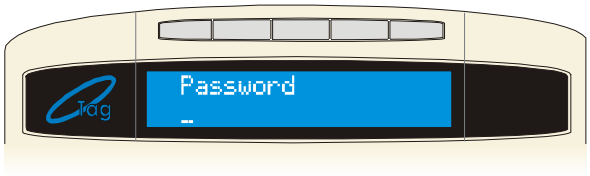


Press the YES key.

Repeat for Signal Faults, Signal Open/Close and Signal Access C. Press the YES key. 'Program PCs' will be displayed. Repeat for further PCs or press the NO key.

If required, enter a text password, this protects the Euro system from anyone dialling in. This password must be entered at the Insite software in order for the PC to connect to the panel.

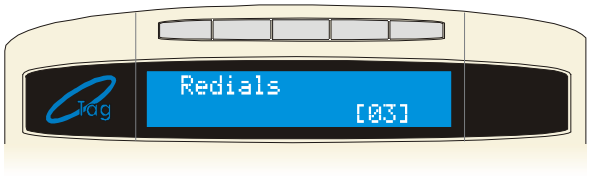
Press the YES key.



Select the number of redials which the panel will attempt (0-15). Press the YES key.

Repeat for the Time Out (The time that the panel will wait for a reply). Press the YES key.

The options: Time Out and Dial Mode are not currently supported please ignore these. Press the NO key. You will be returned to the engineer menu.



5.24 Program ARC / SMS?

The EURO system fitted with digi-modem can be used to dial to an Alarm Receiving Centre or send SMS texts to a mobile phone.

5.24.1 Programming Fast Format

The Fast Format type 4.8.1 is commonly used for BSIA Fast Format.

Up to four numbers can be programmed, each with individual account numbers, channel information and back up telephone number option.

The channels can be individually programmed in the "Program Digi Channels" section. Each channel uses a programmable output number. The default values are described on below:

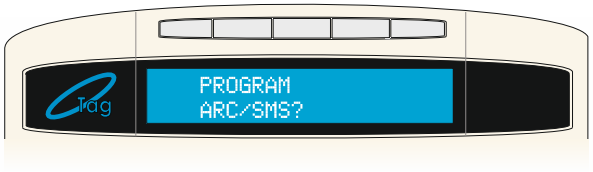
Digi Channel	Output Types
1	Fire (0001)
2	HU Device Any (0009)
3	Unconfirmed Any (0018)
4	Final Set All (0004)
5	Tamper Any (0007)
6	Omit Rearm Any (0017)
7	Confirmed Any (0006)
8	Mains Fail (0052)
9	Global Fault 2 (0056)
10	Test ATS (0064)

The communicator "status channel" (channel 0) is used for low voltage and test calls.

Program ARC/SMS?

Using the [B] and [NO] keys, scroll to **'SET UP DIGI/SMS?'**

Press the [YES] key



To program in an ARC number, press the [YES] key

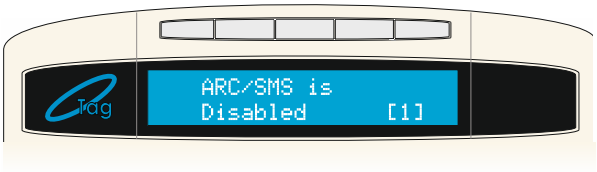
Disable ARC/SMS

Enter [0]: for Enabled

Enter [1]: for Disabled

Press the [YES] key.

Use the numeric keys to select the ARC details to program (up to 4 can be selected).
Press the [YES] key

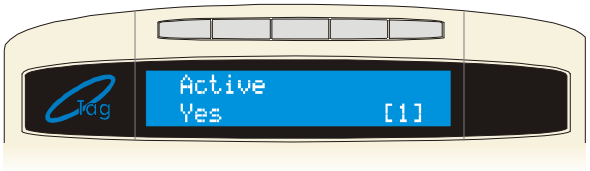


Active

Enter [0]: for No

Enter [1]: for Yes (Enables the ARC Details)

Press the [YES] key

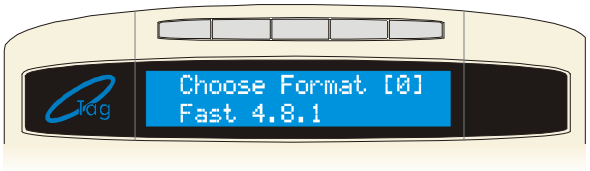


Choose Format

Select the Format you wish to use. The most common protocol that is used in the UK is 'Fast Format 4.8.1, so select '0'. Use the [D] key to scroll through the different formats:

000 = Fast Format 4.8.1
001 = Fast Format 6.8.1
002 = Fast Format 4.16.1
003 = Fast Format 6.16.1

Press the [YES] key



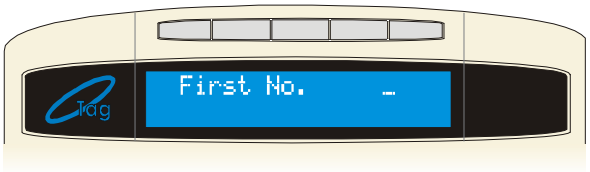
Enter the 1st telephone number.

Press the [YES] key.

Enter the 2nd telephone number.

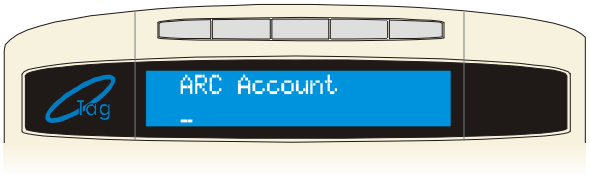
Press the [YES] key.

TO ADD A PAUSE, PRESS THE [A] KEY UNTIL A COMMA IS DISPLAYED



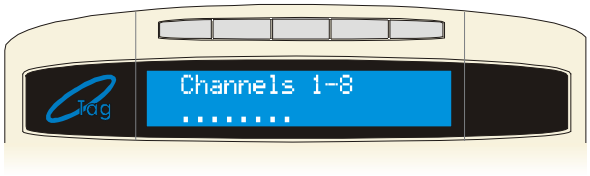
ARC Account

Use the numeric keys to program the account number of the central station (this will be given to you by your ARC). Press the [YES] key.



Select the DIGI channels you require to be sent to the ARC. Please see the table on page 67 for the default channels. Press the YES key.

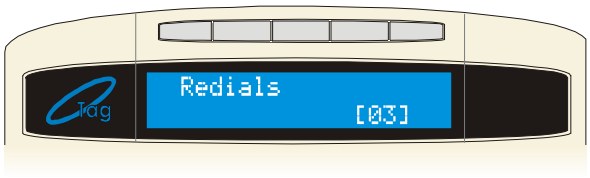
Repeat for the restores you require to be sent to the ARC. Press the YES key.



This displays shows an 8 channel protocol

Select the number of redials you require (0-15). Press the YES key.

Repeat for the Time Out (The time that the panel will wait for a reply). Press the YES key.

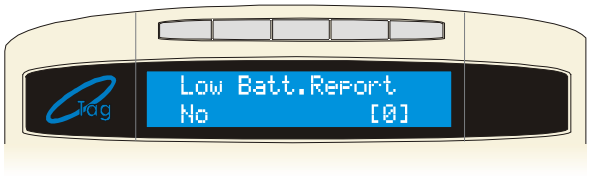


Low Battery Report

Enter 0: for No

Enter 1: for Yes

Press the YES key

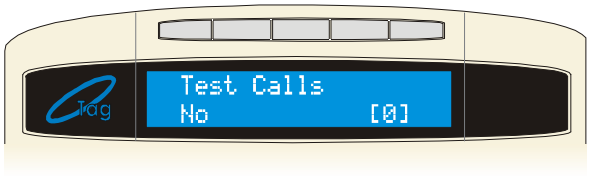


Test Calls

Enter 0: for No. Enter 1: for Timed

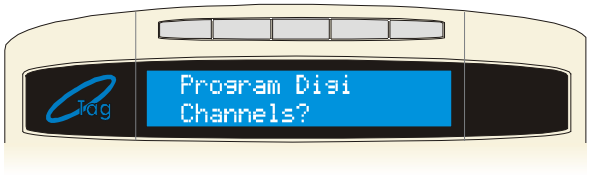
(If Timed is chosen you will need to enter the hours and minutes once you have pressed the YES key)Press the YES key

ARC Details will be displayed. Repeat the above for any other ARC stations you are using. Press the NO key. 'Program Digi/SMS Calls?' will be displayed, press the NO key.



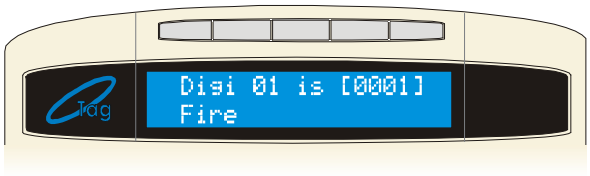
Program Digi Channels

Press the YES key to check that the Digi Channels are what the ARC are looking for.



The first Digi Channel will be shown, once you have checked this is correct, press the YES key to move to the next. To change this channel please see page 48 for the output types. All default values are shown on page 67. Once you have completed all the Digi Channels, 'Program Digi Channels will be displayed'. Press the NO key.

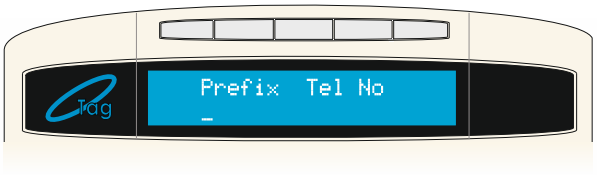
'Advanced SMS Details' will be displayed and Press the NO key.



Prefix Tel No

If a prefix number is needed (e.g. "9") in order for InSite to dial the EURO system , this must be entered here.

Press the YES key

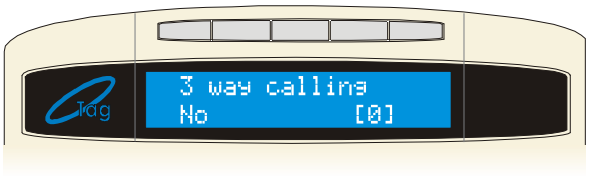


3 Way Calling

Enter [0]: for No

Enter [1]: for Yes

This will apply to both Downloading and Digi signalling. Only available if the facility is enabled on the telephone line.



Press the [YES] key. You will be returned to the Engineer Menu.

5.24.2 Programming Contact iD, SIA, SMS, WebWayOne and Chiron

The Contact iD, SIA and SMS signalling protocol can also be used. However the programming differs from Fast Format, here you have to select the content types you would like to be sent to the Alarm Receiving Centre. The table below shows the types you may have.

Content Types	
1	**Set:** System Set, Secure set system, System rearm, System Final Set,
2	**Unset:** System Unset, System unset by Autoset, Autoset cancelled by a user, Forced Set, set by Autoset
3	**Special Unset:** Special Unset, Access Exit Requested
4	**Set Fail:** Set Failure, Set Failure with input
5	**Alarms:** Case/SAB Tamper, Power Fault, Fire Input Active, Day Alarm Input Active, Intruder Input Active, Radio Low Battery, Fire Key Pressed, Burglary Alarm, Gas Alarm, Tamper Alarm, CCTV, Tamper on Input, Entry/Exit Alarm, No Input Activity Sent, Day Alarm, Perimeter, Interior Alarm
6	**First Alarm:** Burglary Alarm Once, Gas Alarm Once, Tamper Alarm Once, Entry/Exit Alarm Once, Day Alarm Once, Interior Alarm Once,
7	**Alarm Silenced**
8	**Confirmed:** Confirmed Signal
9	**Lo Tech Faults:** STU Telecom Line OK, CCTV Line Fail, CCTV Line OK, Telecom Line OK,
10	**High Tech Faults:** Any faults from Mains, Battery, Communications, Fuses, Device Fail/Restored, Digi Fail Comms, STU Comms Failure, Detector Fault, Detector Masked, Telecom Line Fault,
11	**System Changes/Resets:** Clock Set From/To, Added/Deleted/Changed Code, System Restart, Twin Device, Excess Current, Logs Cleared, Engineer Reset, Clean Start, Site Changed, CHC Call Failed, Logs nearly full, PC Clock Set to,
12	**Manager Info:** Unset System
13	**Engineer Info:** Engineer Access/Exit
14	**Access Control Alarm:** Door Left Open/Forced
15	**Access Control Info:** Tag at Reader
16	**Access Control Ref:** Invalid Tag
17	**Special Log Switcher On:** Input Special Log Switcher Open
18	**Special Log Switcher Off:** Input Special Log Switcher Closed
19	**Special Log Other On:** Input Special Log Open
20	**Special Log Other Off:** Input Special Log Close
21	**Shunt/Ward Set:** Shunt Opened Ward Set
22	**Shunt/Ward Unset:** Shunt Closed Ward Unset/Silenced
23	**Shunt/Ward Alarm:** Ward Alarm
24	**Walk Test:** Input Walk Tested
25	**Restores:** Burglary Restore, Gas Restore, Tamper Restore, Entry/Exit Restore, Tamper on Input Restore, Hold Up Restore, iD line short restore, Fuse fail restore, Case Tamper Restore, SAB Tamper Restore, Day Alarm Restore, Interior Alarm Restore, Radio Low Battery Restore, Radio Jamming Restore, Radio Supervision Restore
26	Not Used
27	**Mains Fail:** Mains Fail Alarm/Restore
28	**Duress:** Fire Alarm,Hold Up Alarm, Duress Code, Fire Alarm Once, Holdup Alarm Once, Fire Restore, PA Restore, Hold Up Restore,
29	**Emergency:** Emergency Input Opened, Emergency Alarm Once, Emergency Restore,
30	**Input Status:** Input Omitted, Input Force Armed
31	**Aborts:** Stopped Set, Abort

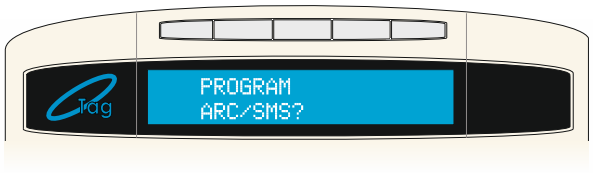
5.24.3 PABX Systems (Only relevant to SMS)

Please note for PABX telephone systems (where a "9" is needed in order to dial an outside line), you must put "NN" before the account number in the "account reference" part of the programming (see below). If you haven't been given an account number then the account reference "NN1111" would be OK to use. This needs to be entered on the keypad.

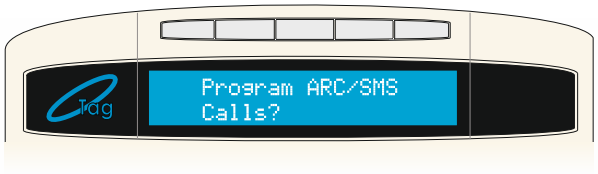
Program ARC/SMS?

Using the [B] and [NO] keys, scroll to **'SET UP DIGI/SMS?'**

Press the [YES] key



To program in an ARC number, press the [YES] key



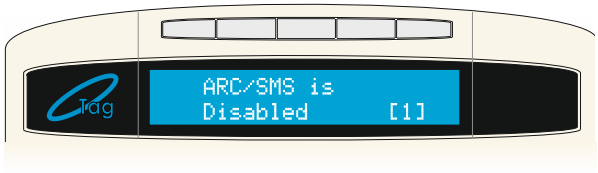
Disable ARC/SMS

[0]: Enabled [1]: Disabled

Press the [YES] key.

Use the numeric keys to select the ARC details to program (up to 4 can be selected).

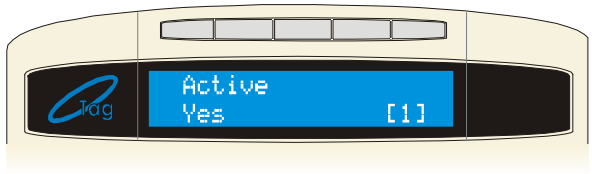
Press the [YES] key



Active

[0]: No [1]: Yes (Enables ARC Details)

Press the [YES] key



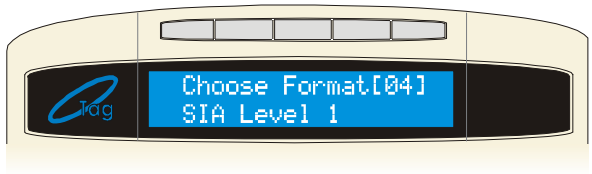
Choose Format

Select the Format you wish to use.

Use the [D] key to scroll through the different formats:

128 = SIA Level 1 129 = SIA 3
130 = Contact iD 133 = SMS Message
134 = SMS-UBS 141 = WebWayOne
142 = Chiron

Press the [YES] key



Enter the 1st telephone number.

Press the [YES] key.

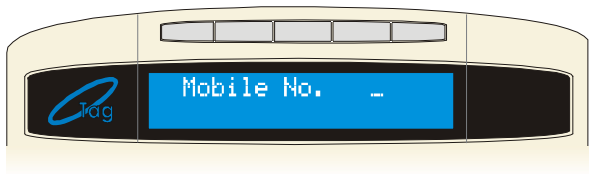
Enter the 2nd telephone number.

Press the [YES] key.

FOR THE SMS PROTOCOL THE FOLLOWING WILL BE DISPLAYED

Enter the Mobile Number

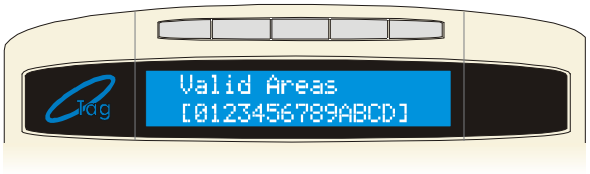
Press the [YES] key.



Select the Areas that you wish to be used.

NOTE: The primary Areas are A, B, C & D.

Press the YES key.



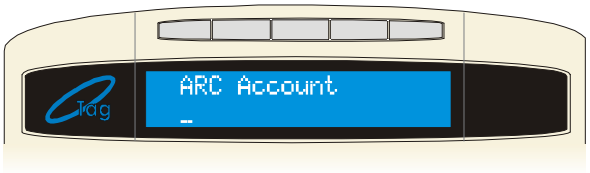
Area Accounts

If you require a different ARC account code for each area, select this options as Yes.

ARC Account

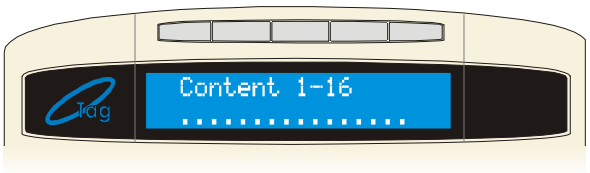
Use the numeric keys to program the account number of the central station (this will be given to you by your ARC). Press the YES key. *Note: If Area accounts have been enabled in the previous option then you will have to assign a different account code for each Area.*

****This won't be displayed on when using the SMS protocol***



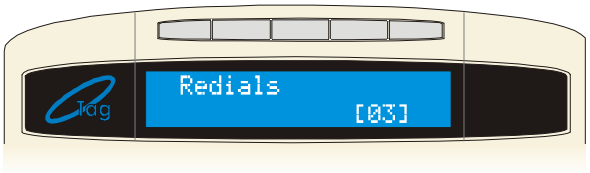
Using the numeric keys select the content types you would like to use. Please see page 70 for the different types. Press the YES key.

Repeat for content types 17-32, Press the YES key.



Select the number of redials you require (0-15). Press the YES key.

Repeat for the Time Out (The time that the panel will wait for a reply). Press the YES key.



Low Battery Report

Enter 0: for No

Enter 1: for Yes

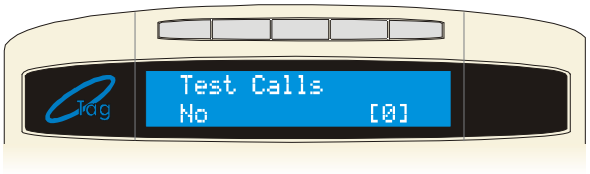
Test Calls

Enter 0: for No

Enter 1: for Timed

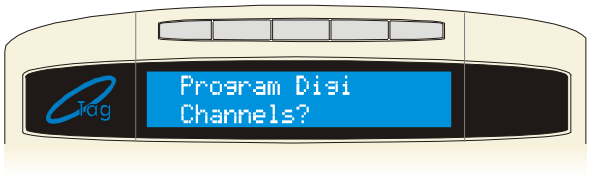
(If Timed is chosen you will need to enter the hours and minutes once you have pressed the YES key). Press the YES key

ARC Details will be displayed. Repeat the above for any other ARC stations you are using. Press the NO key. 'Program ARC/SMS Calls?' will be displayed, press the NO key.



'Program Digi Channels' will be displayed and Press the NO key.

'Program SMS Details' will be displayed and Press the NO key if you are not using the SMS signalling protocol. If you are press the YES key



Setup GPRS

If a GPRS module is connected the following details must be entered in this function:

GPRS APN, GPRS User ID, and GPRS Password.

'Program Digi Channels' will be displayed and Press the NO key.

'Program SMS Details' will be displayed and Press the NO key if you are not using the SMS signalling protocol. If you are press the YES key

Advanced SMS Details

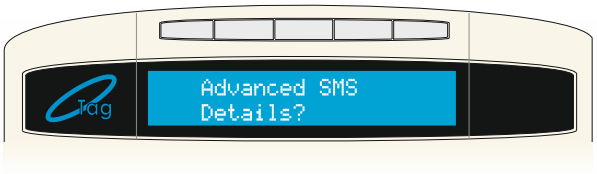
'Advanced SMS Details' will be displayed and Press the YES key.

Account Reference

Enter an account reference if required (contact Customer Support for more information).

If the system is fitted to a PABX which requires a '9' for an outside line, you will need an account code beginning with 'NN'.

Press the YES key, then press NO.



Prefix Tel No

If a prefix number is needed (e.g. "9") in order for InSite to dial the EURO system, this must be entered here.

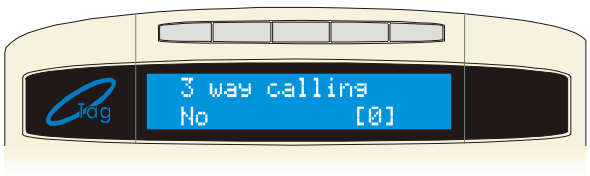
Press the YES key

3 Way Calling

0: for **No** 1: for **Yes**

This will apply to both Downloading and Digi signalling. Only available if the facility is enabled on the telephone line.

Press the YES key. You will be returned to the Engineer Menu.



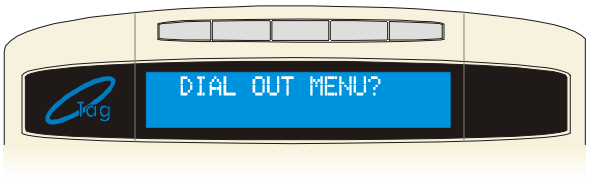
5.25 Dial Out Menu

The Dial Out Menu can be used to dial to a remote PC (rather than the PC dialling the control panel). The modem telephone numbers can be programmed in 'Set Up Downloading' – see page: 65. The following actions can be performed: Connect to PC, Test Dial, Arm Service (You must use the ARM software for this), Data from PC, Data to PC, Diagnostics and Commissions.

Dial Out Menu?

Using the [B] and [NO] keys, scroll to **'DIAL OUT MENU'**

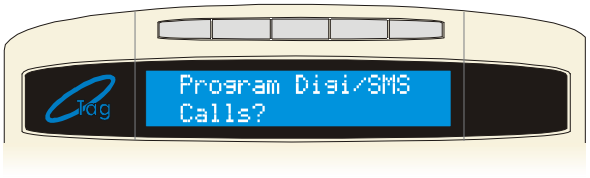
Press the [YES] key



Enter the PC number you wish to dial.

(This is programmed in Set up Downloading – please see 65)

Press the [YES] key



Select Operation

Enter [0]: for Connect to PC

Enter [1]: for Test Dial

Enter [2]: for Arm Service

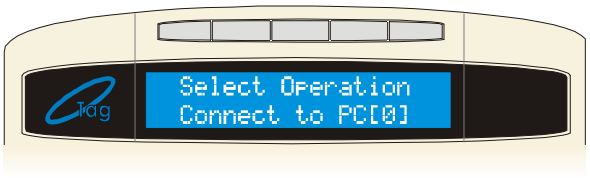
Enter [3]: for Data from PC

Enter [4]: for Data to PC

Enter [5]: for Diagnostics

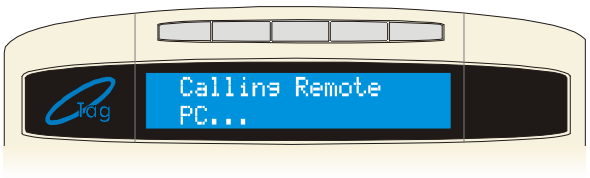
Enter [6]: for Commissions

Press the [YES] key



If the call fails, check your telephone connections and modem numbers.

Press the [YES] key. You will be returned to the Engineer Menu.



CHAPTER 6: TECHNICAL SPECIFICATION

This chapter outlines the internal specifications of the EURO system.

The EURO range has been designed to offer a choice of options to suit most European security applications and can be controlled using PIN code, proximity cards or wireless keyfob. It is also compatible with the Digi Modem (DIGI II) for remote signalling, downloading and/or SMS text messaging. Castle reserves the right to change these specifications at any time, without notice, in the interests of product improvement. Please ensure that this information is used in designing the system, so that it can be installed and programmed as intended, and will continue to function reliably. In particular, system outputs and power supplies must be used within their rated specifications.

6.1 PD6662 :2010

The EURO panels comply with EN50131-3:2009 at the following security grades:

Product	**Security Grade**	**Environmental Class**
EURO 46 (Large)	1 to 3	1 and 2
EURO 46 (Small)	1 to 2	1 and 2
EURO 76	1 to 3	1 and 2
MSX 162	1 to 3	1 and 2
MSX 280	1 to 3	1 and 2
MSX Cards	1 to 3	1 and 2
External Set Reader	1 to 3	1 to 4 [IP65]
Access Reader	N / A	1 to 4 [IP65]
Other Parts	1 to 3	1 and 2

The recommendations of BSIA Form 171 and Form 179 have been taken into account. Power supplies conform to EN50131-6, including the recommendations of BSIA Form 180.

Digi II Modems comply with the requirements of EN50136-2-3 and are suitable for use in systems designed for use with ATS levels 1 and 2 and environmental class 1 and 2 – i.e. systems using notification options up to and including 2B. With the PSTN functioning normally, the ATS will comply with the required performance levels subject to the ARC being suitably equipped. NOTE: This unit may be used for downloading, remote servicing (ARM) or SMS text messaging purposes in systems at ALL security grades.

Notification	Grade 1			Grade 2				Grade 3				Grade 4			
	Options			Options				Options				Options			
	A	B	C	A	B	C	D	A	B	C	D	A	B	C	D
Remotely powered audible WD	2	Op	Op	2	Op	Op	2	2	Op	Op	Op	2	Op	Op	Op
Self-powered audible WD	Op	1	Op	Op	1	Op	Op	Op	1	Op	Op	Op	1	Op	Op
Main ATS	Op	Op	ATS 1	ATS 2	ATS 2	ATS 2	ATS 3	ATS 4	ATS 4	ATS 4	ATS 5	ATS 5	ATS 5	ATS 5	ATS 5
Additional ATS	Op	Op	Op	Op	Op	ATS 1	Op	Op	Op	ATS 3	Op	Op	Op	ATS 4	Op

6.2 Compliance

When all parts are working normally, this equipment in combination with the PSTN and suitable ARC equipment will meet the requirements of ATS2.

This product complies with EN50131-3:2009, EN50131-1:2006+A1:2009, PD6662:2010 at Security Grade 3, Environmental Class 2.

6.3 Inovonics

Inovonics wireless equipment complies with the requirements of EN50131-5-3 and is suitable for use in systems installed to PD6662:2010 at Security Grade 2 and Environmental Class 2.

6.4 BS8243:2010

The EURO range fully complies with requirements of BS8243:2010.
ALL appropriate facilities and options are available for systems using sequential confirmation signalling except zeroing of 'Confirm Timer' if first input to alarm retriggers.

6.5 CE Compliance Statement

The EURO range complies with requirements of the European "EMC Directive" (2004/108/EC), the "Low Voltage Directive" (2006/95/EC) the "Reduction of Hazardous Substances Directive" (2002/95/EC). Appropriate components additionally comply with the requirements of the R&TTE Directive (1995/5/EC).

It is essential that the recommendations in this manual be followed, and that equipment and wiring be installed to avoid the effects of potential sources of interference.

6.6 Expansion of Panels

Provision is made for an MSX Card (System Expander) to be slotted in to the EURO End Station. This enables the system to be expanded, and the facilities available further enhanced.

The EURO 76 has flashing fuse LEDs on the PCB and the plug-on-STU/DIGI/ATE footprint interface. If the MSX card is taken out of the panel, the EURO then becomes a Version 6, Grade 2, EURO 28. Please note the EURO 46 cannot be expanded.

6.7 Programmable Options

Please note that certain programmable options or combinations of options are designed for specific requirements of certain standards, or for use in specific countries using standards different from the UK. Incorrect use of options could therefore result in the installed system failing to comply with the requirements of the appropriate standards for which it is designed. Castle Care-Tech Ltd cannot accept liability for such non-compliances if incorrect options or combinations of options have been selected.

6.8 Warranty

This product is sold subject to our standard warranty conditions and is warranted against defects in workmanship for a period of 2 years. In the interest of continuing improvement of quality, customer care and design, Castle reserves the right to amend specifications without giving prior notice.

6.9 Repairs

Products for repair should be returned to the factory, suitably packed to prevent damage (including damage from electrostatic discharges), and to prevent injury to those opening the packaging, and be accompanied by the full return address. RMA numbers must be obtained prior to sending back faulty equipment by ringing either customer support (0845 6434 999 or 01709 535225) or sales (01344 469479). It is ESSENTIAL that full details of the fault are reported. A note simply saying 'faulty' is not adequate.

6.10 Power Supplies

POWER SUPPLIES conform to the requirements of EN50131-6:2008 (including the recommendations of BSIA Form 180). Power supplies are rated in accordance with the requirements of EN50131-6, which are related to the maximum battery size that can be accommodated in the housing and vary according to the grade of the system in which they are installed, as per the following table:

Electrical Capability		**EN50131-6 Rating**		
		Grade 1	Grade 2	Grade 3
1A	Yuasa NP7-12	0.9A	0.5A	0.3A
1.5A	Yuasa NP17-12	1.2A	1.2A	0.7A

NOTES:
1. EURO power supplies are NOT designed for use with multiple batteries connected.
2. System load should not exceed the PS rating quoted above, or the maximum load supportable by the battery for the specified backup time, as in the table below.
3. PS ratings are based on battery shown in table – but ANY battery capable of supporting the system load for the required time may be used without affecting these ratings.

As a guide, the following table shows how much load you can place on the system in order for a battery of the given size to keep the system running for the required amount of time:

Battery	**Grade 2** (12 Hours Backup required)	**Grade 3 with mains fail signalling** (12 hours backup required)	**Grade 3 without mains fail signalling** (24 hours backup required)
3Ah	0.22A	0.22A	0.11A
7Ah	0.55A	0.55A	0.28A
17Ah	1.38A	1.38A	0.69A

6.11 Basic System Specifications

INPUT RESISTANCE	2k2 Range (Default)	1k Range	4k7 Range
Normal	1k4 to 2k9	0k5 to 1k4	3k7 to 8k3
Intruder	4k2 to 7k8	1k5 to 5k9	8k4 to 10k2
Fault	8k to 11k3	6k to 8k1	10k3 to 14k9
Masking	11k6 to 22k	8k2 to 17k	15k to 23k
Tamper	<1k4 or >22k	<0k5 or >17k	<3k7 or >23k

FUSES	VALUES
F1 (PGMs)	800mA fast blow RFSE016 = F800mAL glass body
F2 (BELL)	800mA fast blow RFSE016 = F800mAL glass body
F3 (AUX)	800mA fast blow RFSE016 = F800mAL glass body
F4 (BUS)	800mA fast blow RFSE016 = F800mAL glass body
F5 (BATTERY)	3.15A slow blow RFSE027 = T3.15AL Glass body
F7 (iD Fuse)	500mA
Mains Fuse	500mA

POWER SUPPLY	
Power Input	17V AC (500mA Fuse)
Transformer Rating	27VA
Input Voltage	230V AC
Output Voltage	12V DC nominal
EN50131-6 Type	A
Voltage Range	13.60 – 14.9V DC
Ripple	5mV @ 1.5A
Panel Current Req.	End Station: 75-90mA

BATTERY	
Battery Type	12V Lead Acid
Recharge Time	24 hours
Battery Capacity	22Ahr Max (7Ah Max EURO 46S)

PROGRAMMABLE OUTPUTS (PGMS)	
Output 1 (relay)	30V @ 3A
Output 2 (relay)	30V @ 3A
Speaker	16 ohms
Strobe Output	500mA
Bell Output	500mA

TEMPERATURES	
Operational	-10°C to +40°C. (14°F to 104°F)
Storage	-20°C to +60°C. (-4°F to 140°F)

DIMENSIONS	
Large Casing	390 x 305 x 100mm
Small Casing (46)	250 x 297 x 82mm
Printed Circuit Board	150 x 175 x 30mm

VARIATIONS LOGICAL / PHYSICAL KEYS	
4-digit codes	10,000
5-digit codes	100,000
Disallowed codes	None
Other logical keys	16^{12}
Method	
According to TS50131-3:2003 Annex B	
According to spec of manufacturer of RFiD components used	

EURO 46 – BATTERY RECOMMENDATIONS

Battery recommended for small casing: 3AHr – 7Ahr

Battery recommended for large casing: 7AHr – 17Ahr (installing less than 7AHr will damage the battery)

6.12 Device Technical Specifications

CONTEMPORARY LCD RKP (EUR-064)	
Supply Voltage	13.8V (9-16V range)
Supply Current	
Back light off	Quiescent: 49mA Alarm: 63mA
Min Brightness	Quiescent: 101mA Alarm: 111mA
Max Brightness	Quiescent: 104mA Alarm: 113mA
Operating Temp	0 to 50°C
Dimension	139 x 99 x 29mm
Output Current	100mA

EXTERNAL TAG READER (EUR-108X)	
Supply Voltage	13.8V (9-16V range)
Supply Current	Quiescent: 37.7mA Alarm: 90mA
Operating Temperature	-10 to +50°C
Dimensions	85 x 85 x 21mm

INTERNAL TAG READER (EUR-107)	
Supply Voltage	10.5 to 15V
Supply Current	Quiescent: 17.8mA In Alarm = 44mA
Operating Temperature	-10°C to +40°C
Dimension	100 x 70 x 30mm
Output Current	100mA
Supply Voltage	10.5 to 15V

TMZ	
Supply Voltage	10.5 to 15V
Supply Current	17.1mA
Operating Temperature	-10°C to +40°C
Dimension	100 x 70 x 30mm
Output Current	500mA

INPUT EXPANDER (ZEM8)	
Supply Voltage	10.5V to 15V
Quiescent Current	41.3mA
Dimensions	113 x 86 x 15mm

INPUT EXPANDER (ZEM830)	
Supply Voltage	10.5 to 15V
Supply Current	Quiescent: 19.1mA
Operating Temperature	-10°C to +40°C
Dimension	166 x 110 x 15mm
Output Current	500mA
Supply Voltage	10.5 to 15V

OUTPUT MODULE (EUR-077)	
Supply Voltage	10.5V to 15V
Supply Current	15.4mA (no relays)
Supply Current	480mA (all relays) 45.5mA (one relay)
Max Switching Voltage	24A
Max Switching Current	3A

OUTPUT MODULE (EUR-035)	
Supply Voltage	10.5V to 15V
Supply Current	Quiescent: 16.0mA
Note: Restricted to maximum of 400mA simultaneous loading. A plug-on interface is available for these outputs. **Plug-on Relay Interface:** Supply current All relays open: 320mA (40mA per relay) Relays 1 – 2.5A (Volt Free)	

POWER SUPPLIES FOR ZEMs and Output Modules	
Power Supply	2.5A
Mains (220-240V AC)	50Hz 150mA
Mains Fuse	Slow Blow (T) 250mA
Output	13.75V 1.0A continuous
Battery Fuse	3.15A Quick Blow
Output Fuse	1.25A Quick Blow

6.12.1 Lightning Protection

The Inbuilt lightning protection is provided by fast acting gas discharge tubes.

The quality of the protection is dependent upon the low impedance telecoms earth ⏚ being connected.

CHAPTER 7: SAFETY

1. A technically competent person must carry out the mains installation in accordance with the national and local electrical installation regulations. Ensure wiring is done to the national wiring regulations in the country where the installation is taking place. In the UK, this is BS7671 requirements for electrical installations; IET Wiring Regulations (17th edition). If in doubt, consult a local qualified electrician.
2. **Protective Earth:** This equipment must be earthed/grounded.
3. **Functional Earth:** Must be connected to earth terminal to allow the equipment to operate correctly. Has no safety implications.
4. Connect the unit to a single pole, unswitched, 3 Amp fused spur, using 0.75mm^2 cable. If the Neutral cannot be positively identified use a double pole disconnect version. Ensure that a readily accessible disconnect device incorporated in the premises installation wiring shall be provided external to the equipment with a contact separation of at least 3,0mm and connected as closely as possible to the supply.
5. Always remove / isolate the mains supply before carrying out any servicing of the panel.
6. **Fuses:** For continued protection against the risk of fire, replace only with the same type and rating of fuse.
7. There are no user serviceable parts inside the equipment.
8. This unit should be mounted so that there will be no outside access to the electrical cable entry point.
9. **Ventilation:** To ensure the correct airflow, always mount the unit vertically with the unit having a clear space on all sides. It must not be covered by clothes, furnishings, boxes, etc. It must not be mounted close to, or above, heat radiating sources.
10. On completion of wiring, use tie-wraps to prevent any loose wires causing a safety hazard. (material of cables tie shall be rated at least HB or better).
11. The mechanical mounting of the unit must be secure enough to carry the full weight of the unit including all batteries.
12. **Batteries:** Ensure that the battery terminal connections will not create an electrical short-circuit on the case metalwork when the unit is closed. Use insulated battery lead connectors.
13. Dispose of old batteries as required by environmental legislation / recommendations.
14. The battery case must have a flame-retardant rating of UL94-V2/V1/V0 – IEC60950:2000
15. **Water:** The equipment must be kept free from dampness, water and any other liquids. It is only suitable for installation indoors.
16. When fixing external wires, ensure that means are provided in the installation to prevent the SELV or signal circuits from coming into contact with live parts of the power supply circuit. Wires shall be fixed near their terminal blocks.
17. The end of the stranded conductor shall not be consolidated by soft soldering at places where the conductor is subjected to contact pressure.
18. Cable ties and hoses shall be separate for power supply cable and SELV wirings.
19. Size of protective bonding conductors: minimum section 1.5mm

	Protective Earth	Must be connected to the electrical installation earth / ground
	Protective Bonding	Must be connected to the equipment protective earth terminal
	Functional Earth	Must be connected to earth terminal to allow the equipment to operate correctly. Has no safety implications.
	Read	Read equipment instructions

CHAPTER 8: INSTALLATION

This chapter describes the recommended procedure for installing EURO systems

8.1 Electromagnetic Compatibility (EMC)

The EURO system has been designed to meet or exceed all relevant EMC requirements. This alone does not guarantee that no problems will be experienced, especially in relation to older equipment not designed to the same standards, or to equipment for which the same provisions of the EMC Directive do not apply.

To maintain full EMC performance for the system, it is essential that the following points be followed:

- All other equipment used must carry the CE mark for electromagnetic compatibility.
- Do not locate the EURO system, or any other component, close to equipment switching high frequencies, or using radio frequencies in its operation.
- Avoid using mains supplies contaminated by interference generated by switching, arcing, etc.
- The system must be connected to a good, clean earth. The earth connection of housing lids is a mandatory safety requirement.
- The correct cable type should be used for each application as specified.
- Cables should be routed to avoid the possibility of interference being picked up from other nearby cabling or equipment. Be alert to the possibility of other cables being installed after the alarm system has been commissioned.

For further information refer to BSIA "EMC Guidelines for Alarm Installers".

8.2 Mounting Procedure for the EURO system

The following steps illustrate basic mounting procedure for the EURO metal case.

Step 1 – Remove the case lid from the EURO panel and check all parts and components are in place.

Step 2 – Decide where the EURO panel will be situated. The EURO panel may be housed in the loft or different rooms in the premises. A discrete and concealed place is advisable, as only the EURO keypads need to be seen.

Step 3 – Secure the EURO panel to a sturdy and stable surface, using the mounting screws provided. First mark the wall where the panel is to be situated (using the mounting holes), drill holes in the wall, and fasten the panel base to the wall using the screws provided.

Step 4 – Before the panel base is completely secured to the wall feed cables for keypads / AC power supply / and accessories through the cable entry holes as illustrated.

8.3 Resistors

The resistor values are recognised as follows:

2k2 resistor = Red / Red / Red

4k7 resistor = Yellow / Violet / Red

6k8 resistor = Blue / Grey / Red

12k resistor = Brown / Red / Orange

470Ω resistor = Yellow / Violet / Brown

8.4 Battery Installation Procedure

Place two foam pads on the bottom of the battery and two on the upper rear. Place the battery in the case and secure with two tie wraps.

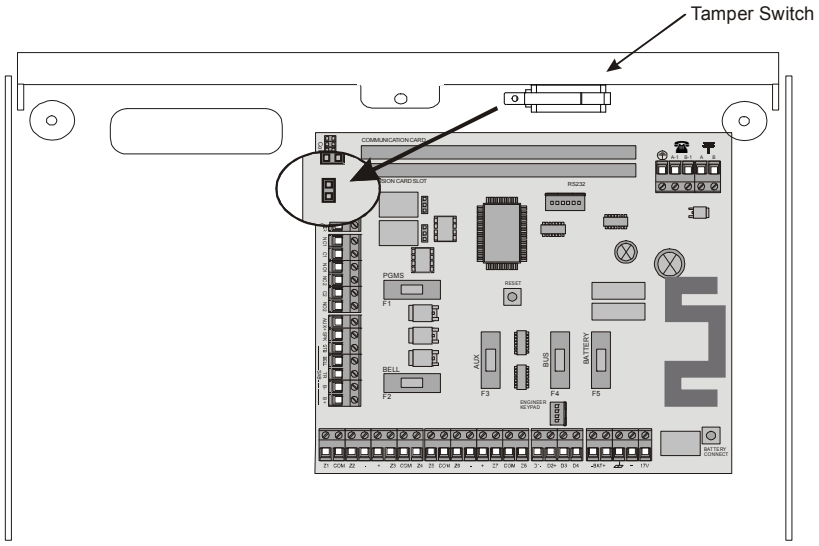
8.5 Mounting Procedure for Devices

Mount the equipment carefully in suitable locations, noting particularly the following:

- Input expander units (ZEMs or TMZ2s) should be located to suit the wiring to appropriate detectors. Mounting more than two together is not recommended.
- Where input expanders, output modules or access controllers are mounted on power supplies, all connections are automatically made to draw all current from the power supply, and to use the system diagnostic capabilities to control the power supply.
- Intelligent power supplies cannot be used in isolation from the EURO system plug-on PCBs.
- Keypads and tag readers should **NOT** be mounted on or near a metal surface, or within a metre of each other, or tag response could be affected.
- Where provided, metal housings must have the earth strap connected to the lid to meet electrical safety regulations.

8.6 Tamper Switches

The Tamper switch that is already fitted onto the metal case connects via a plug-on connector to the tamper pins on the EURO control panel as shown below:



8.7 Mains Connection

MAINS ELECTRICITY IS DANGEROUS!

Mains connection must be performed by a qualified electrician, in accordance with electrical wiring regulations (BS.7671).

The earth connection must be correctly made to the centre terminal of the mains block, and to terminal G1 of the End Station, and of any intelligent power supplies.

Metal lids must be correctly connected to mains earth by the wiring loom provided, before securing in position.

Note: The PCB ground connection is NOT a safety earth connection, but is for EMC filtering purposes.

Warning: Always disconnect the mains supply before removing the cover and working on the equipment.

8.8 System Connections

***Note:* Never add equipment to the system with power applied, or damage can result.**

Please refer to the following diagrams to identify the functions of all the terminals on EURO components. Note that all components use the same identification for equivalent applications – e.g. D1, D2, D3 and D4 will always be the RS-485 terminations, etc.

8.9 DigiModem

Information for installing the DigiModem is shown separately on page 89.

8.10 Expander Card

Information for installing the Expander card is shown separately on page 93.

8.11 Access Control and Guard Tour Equipment

Information for installing access control and guard tour equipment is shown in page: 129.

8.12 Cabling Information

8.12.1 Planning the Cable Routes

Care should be taken to avoid running alarm cables in the same trunking as, or otherwise close to, cables carrying signals that may cause interference – e.g. telephone cables, etc.

Similarly, where practical, avoid routing cables close to equipment capable of generating interference – e.g. fluorescent lighting, welding equipment, etc.

Never run alarm cables in the same trunking as mains cables.

8.12.2 Screened Cable

When screened cable is used, the screen should be terminated at the control panel (or ZEM module) only. For best results, connect to the metalwork immediately at the point of cable entry into the housing, with a 'pigtail' not exceeding 5cm.

Terminals are provided in all EURO housings for this purpose.

Cables should not be looped inside the housings, or routed across or underneath printed circuit boards. Ensure that screen connections are continuous through all intermediate detectors, junction boxes, etc. SCREENED cable should ALWAYS be used with iD plus systems.

8.12.3 Wiring Specifications

NOTE: The following specifications must be observed when installing EURO alarm systems.

General Principals

1	Routing:	No alarm system cable should be run with other cables carrying AC or digital signals.
2	Insulation:	Should be protected by the use of grommets, etc. where appropriate.
3	Specifications:	The following specifications for cable types and distances are important for reliable operation.

RS-485 Wiring

1	Cores:	**4-core minimum. Use of 6-core and doubling up of power supply core is beneficial to minimise voltage drops, but never double communications connections.**

2	Cable Type:	**Twisted Pair always recommended.** **Screening always recommended.** **Up to 300m:** Standard alarm cable. **Between 300m and 1000m:** Twisted Pair. **Greater than 1000m:** RS485 repeaters required **Screened cable should be used if the system has been installed in hostile environments where there maybe high levels of Radio Frequencies or mains interference, e.g. heavy plant welding.** Example: Twisted pair, e.g. Belden 9744 (unscreened) or 9502 (screened).
3	Wiring Format:	Parallel, 'daisy-chained'.
4	Cable Length:	Overall network max. 1Km.
5	Termination:	<10m: None >10m: Extreme end points fitted with 470Ω resistors between D3 and D4. >100m: 240 Ω resistors (or 2 x 470Ω resistors twisted together) between D3 and D4 >300m Belden: Extreme end points fitted with 120Ω resistors between D3 and D4

End of Line Input Wiring

1	Cores:	4-core.
2	Cable Type:	Standard alarm cable, screened in poor environments.
3	Wiring Format:	Detectors individually wired, using EOL resistors mounted at detector.
4	Cable Length:	Max. 1Km per detector.

iD plus Input Wiring

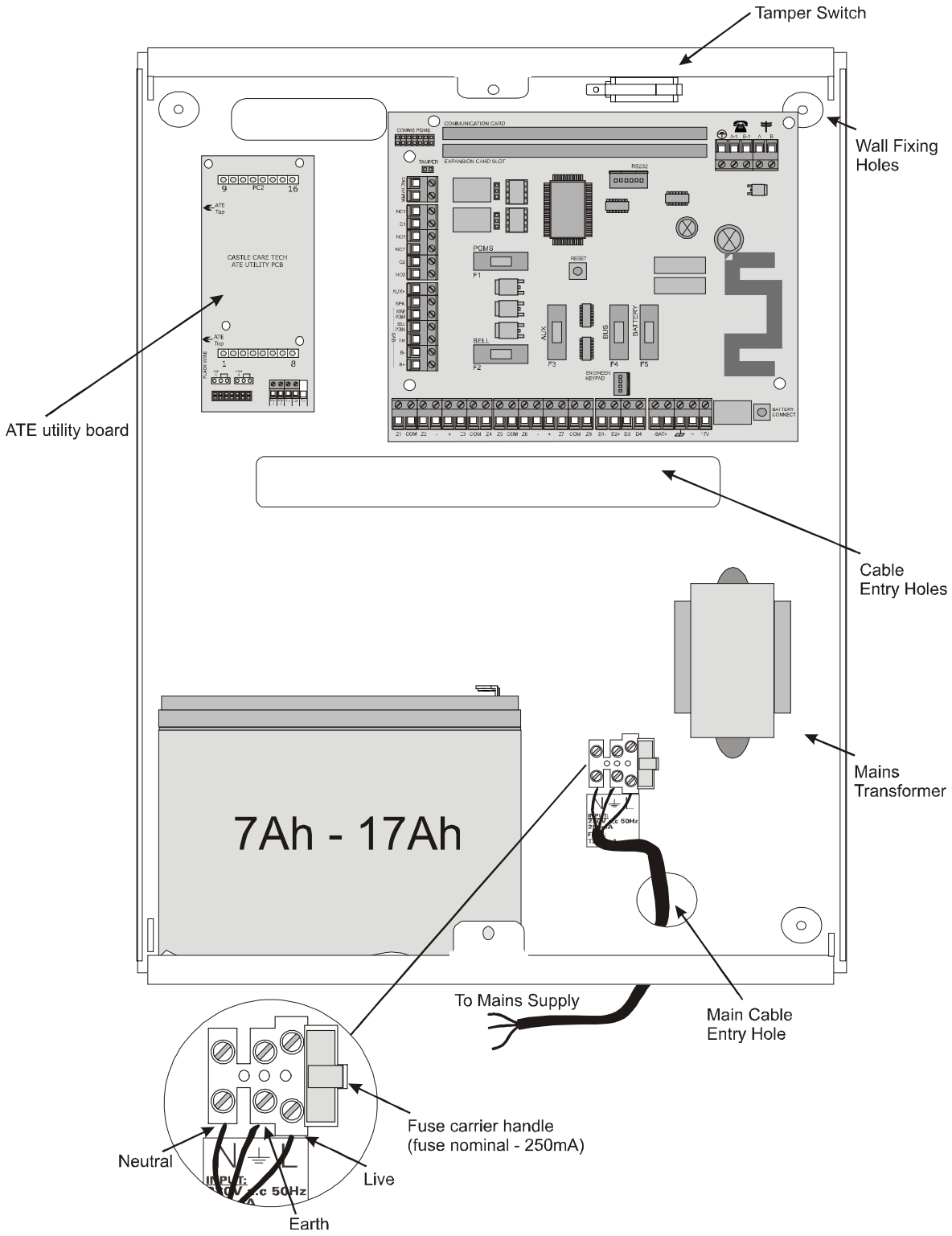
1	Cores:	Screened 4-core.
2	Cable Type:	Standard alarm cable, MUST be screened. Doubling up supply cores will minimise volt drop to detectors. Doubling of iD cores is also possible.
3	Wiring Format:	Any parallel format, except 'ring main' loops.
4	Termination:	0.01µF capacitor between iD+/- at end of each cable run.
5	Cable Length:	Max. 100m for any cable run.
6	Biscuit Location:	Must be wired directly to detector terminals. If it is impossible to locate the biscuit in this way, a double pole junction box must be used.
7	Checks:	All commissioning checks must be performed and recorded.
8	Warning:	In some situations, especially take-over situations using existing wiring, iD technology may not be suitable.

8.12.4 RS-485 Communication Wiring

NOTE: On a network of 10 metres or more, the extreme end points of the RS-485 bus should be terminated with 470 ohm resistors between D3 and D4 (colour: yellow/violet/brown).

CHAPTER 9: THE EURO PANELS

9.1 THE EURO 76

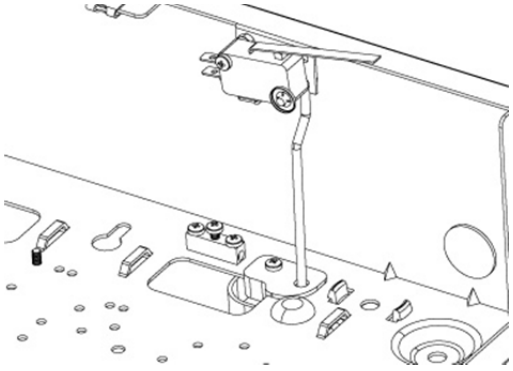


IT IS RECOMMENDED THAT A 7AHr – 17AHr BATTERY IS USED

9.2 The Rear Tamper Switch

The new rear tamper mechanism comes already fitted.

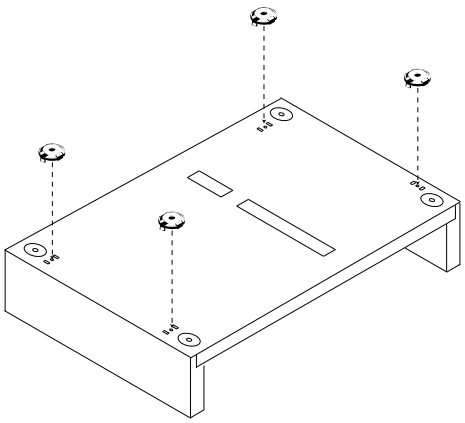
Once the metal casing is mounted on a wall, the metal rod is fixed into place on the tamper switch, if the casing is pulled away from the wall, the tamper switch will drop downward and a tamper activation will occur.



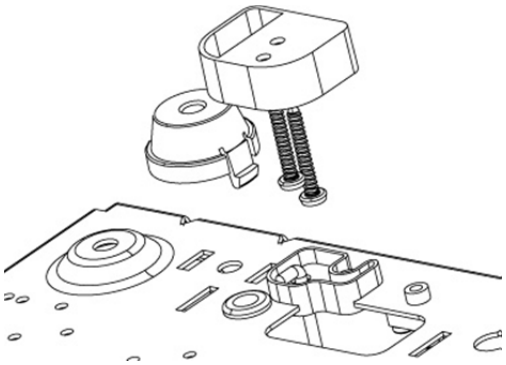
9.3 The Stand Offs

There are 4 stand offs that are supplied if needed when mounting the metal casing.

These can be easily connected into the sections are shown on the right.



If the supplied stand offs are used, then the rear tamper switch will need the back tamper spacer fixed on to the wall with the supplied 2 screws (as shown to the right).



9.4 Mounting Procedure for Devices

Mount the equipment carefully in suitable locations, noting particularly the following:

a. Input expander units (ZEMs or TMZ2s) should be located to suit the wiring to appropriate detectors. Mounting more than two together is not recommended.

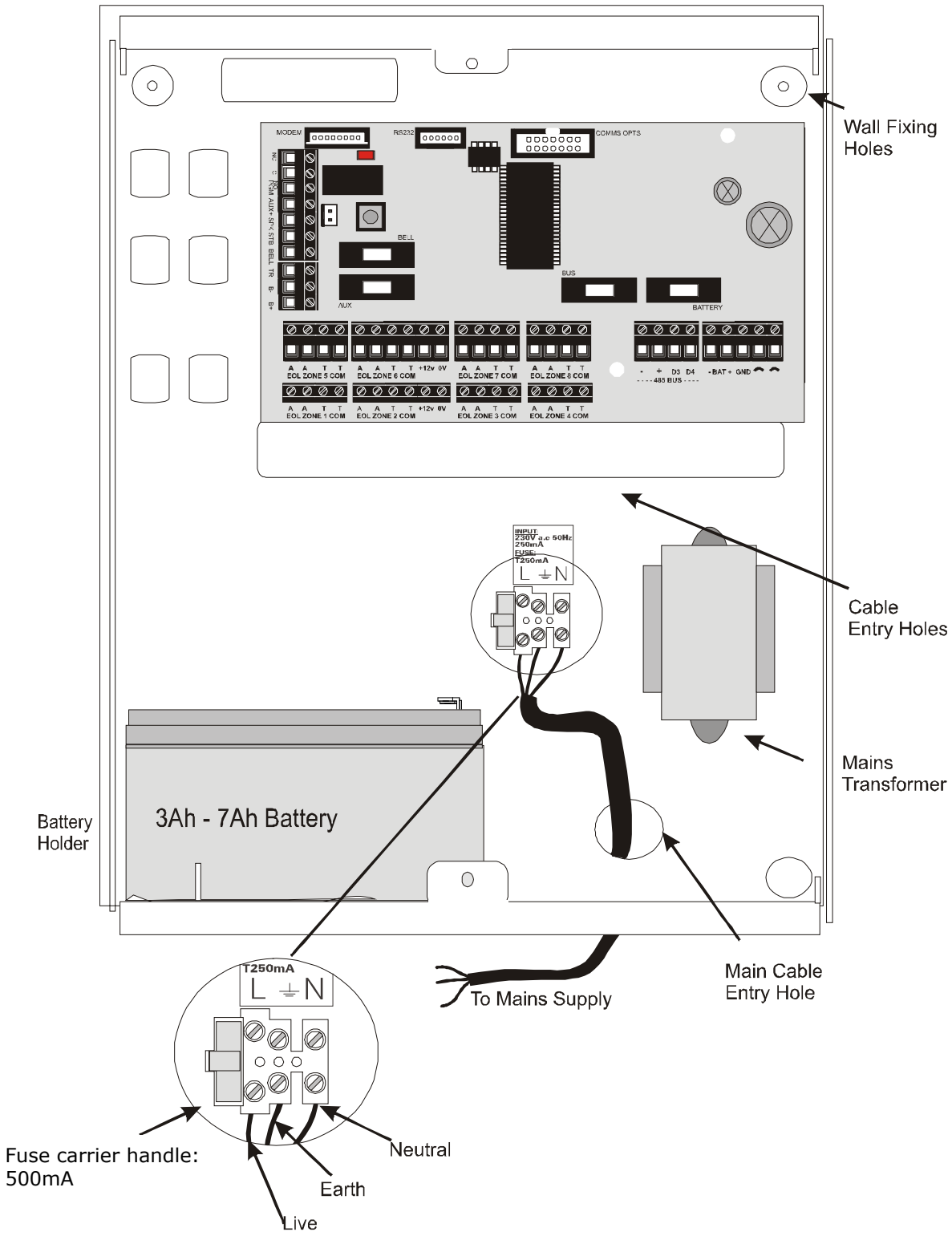
b. Where input expanders, output modules or access controllers are mounted on power supplies, all connections are automatically made to draw all current from the power supply, and to use the system diagnostic capabilities to control the power supply.

c. Intelligent power supplies cannot be used in isolation from the EURO system plug-on PCBs.

d. Keypads and tag readers should **NOT** be mounted on or near a metal surface, or within a metre of each other, or tag response could be affected.

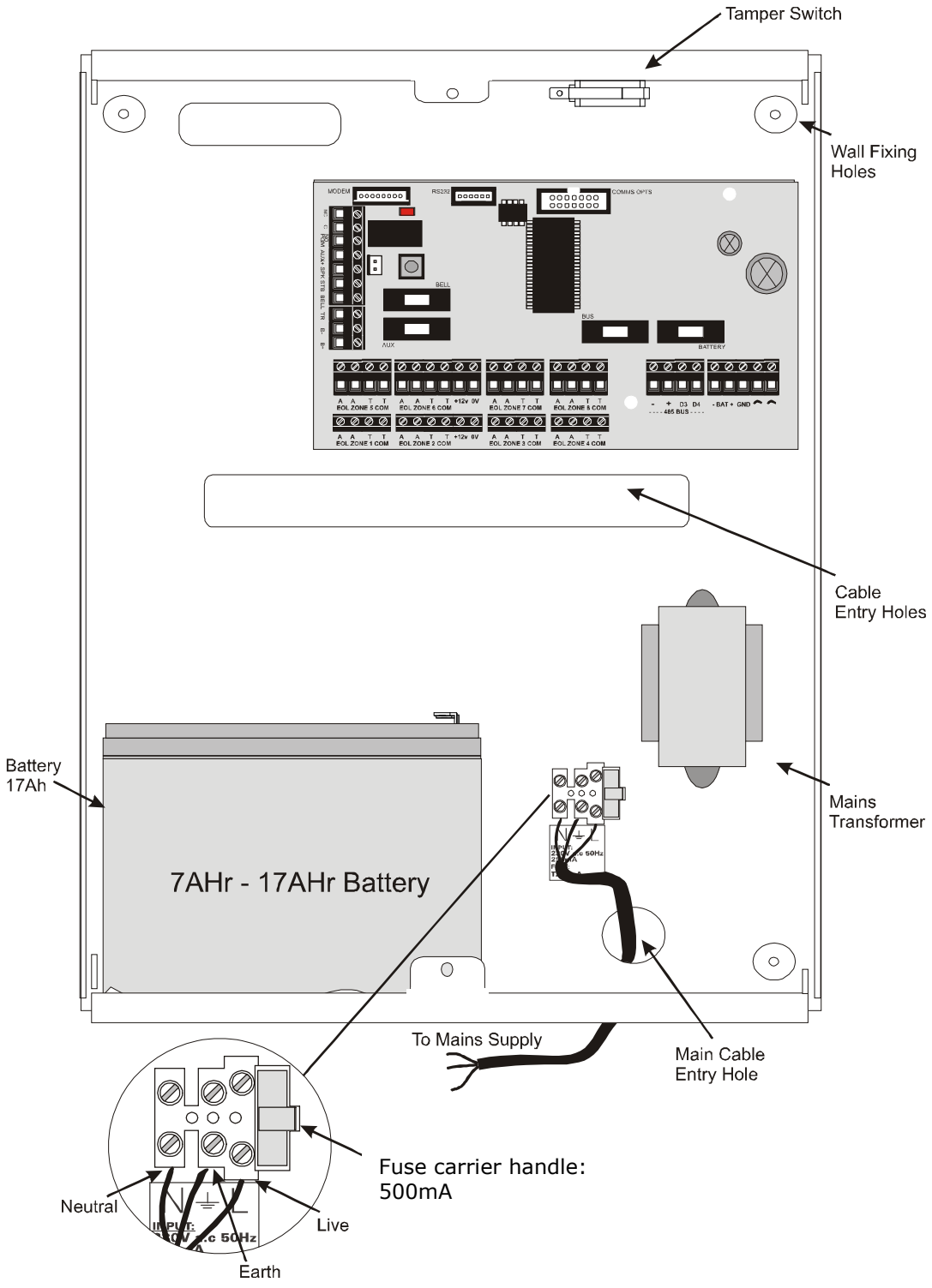
e. Where provided, metal housings must have the earth strap connected to the lid to meet electrical safety regulations.

9.5 THE EURO 46 (small casing)



IF USING THE SMALL CASE, PLEASE INSTALL A 3AHr – 7AHr BATTERY

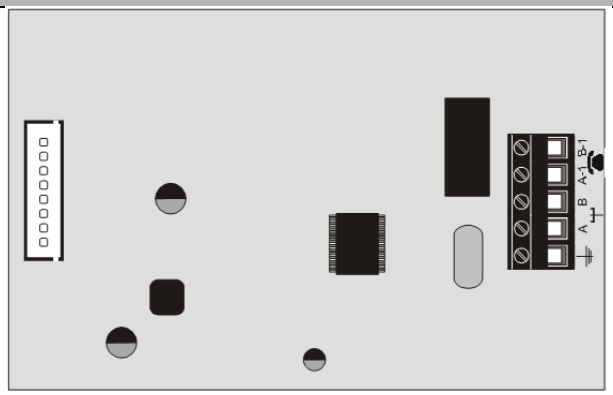
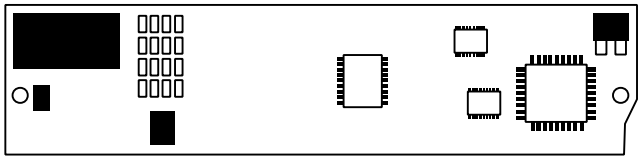
9.6 THE EURO 46 (large casing)



IF USING THE LARGE CASE, PLEASE INSTALL A 7AHr – 17AHr BATTERY. INSTALLING LESS THAN 7AHr WILL DAMAGE THE BATTERY

CHAPTER 10: THE DIGI MODEM CARD

The Digi-Modem card is design to slot into a SIMM socket (Communication card) on the EURO 76, 162, 280 systems. The EURO 46 has a modem that connects with the printed circuit board via the supplied cable. Both modems are specified to operate with BT lines.

EURO 46 modem	EURO 76, 162, 280 modem
	

<u>Note:</u> Attempts to use the device in any other host will invalidate the safety certification, could cause damage to the equipment, and may be hazardous.

The card **must** be installed and used as described in these installation instructions.

All connections to the end station are made automatically. Terminals for connection to the PSTN are located on the end station PCB.

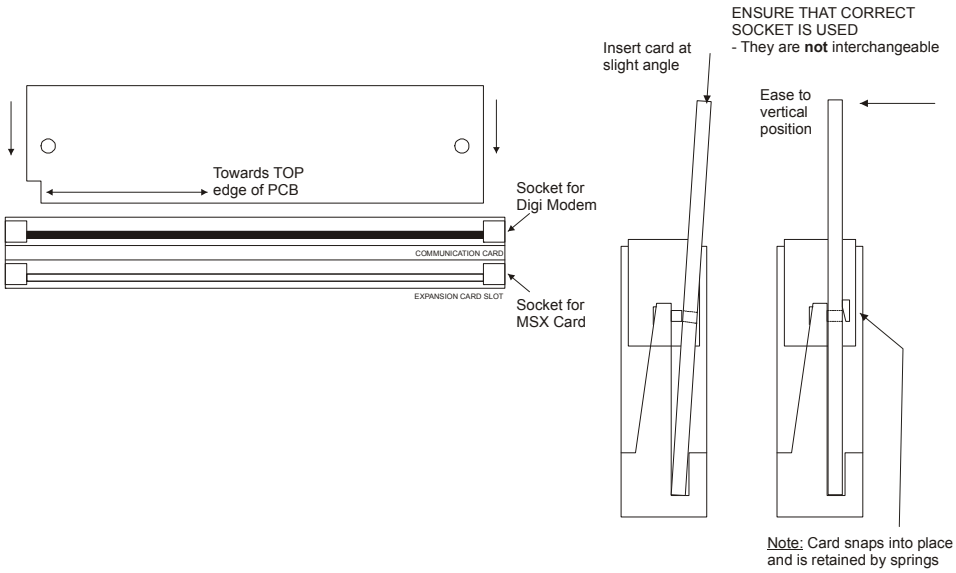
When the unit is used on a shared line, the total REN loading of the line must not exceed **2.5**. The REN value of any piece of equipment which is not marked should be assumed to be 1.

The REN value of the DIGI MODEM CARD is 1.

10.1 Fitting the snap in Digi-Modem Card to the EURO 76 / 162 / 280

Before slotting the Digi-Modem card into the SIMM slot on the end station, **all power must be disconnected**.

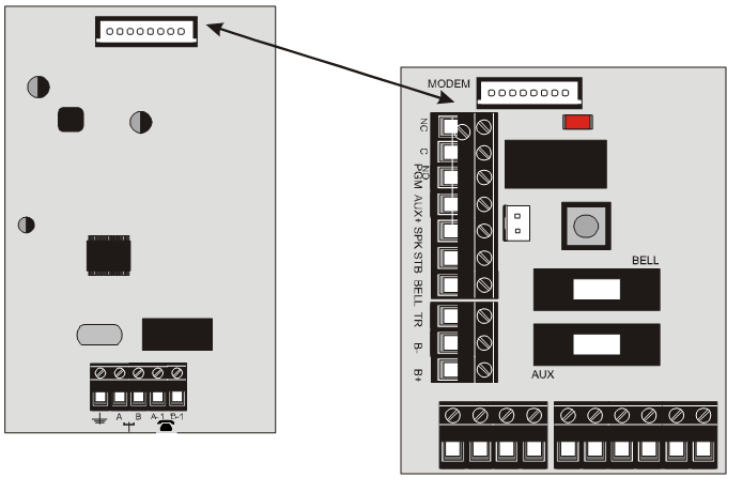
The card must be slotted into the correct socket (labelled communication card) on the end station. This is the **upper** socket.



Should it be necessary to remove the unit, the reverse procedure should be performed, ensuring that all power is removed before doing so.

10.2 Fitting the remote modem to the EURO 46

Use the cable supplied to connect the modem to the EURO 46 PCB. The modem should be mounted to the left of the printed circuit board and lined up with the mounting holes.



All power must be disconnected before connecting the modem

10.3 PSTN Wiring

Connections are made to the terminals on the end station PCB:

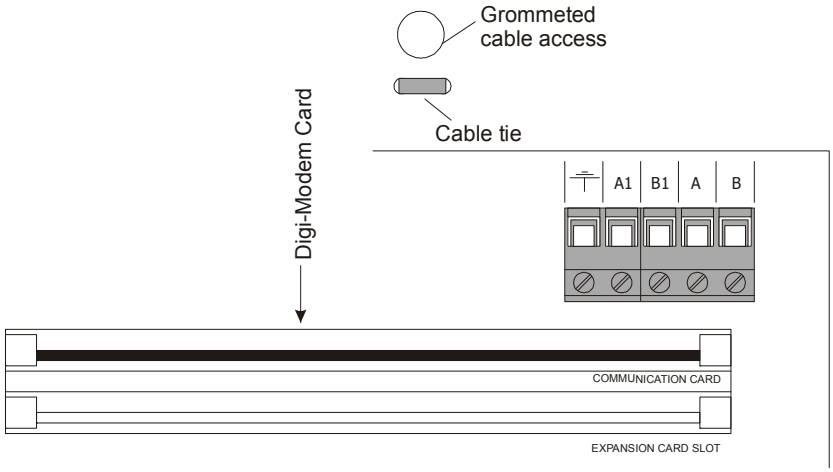
A	Telephone line output for connection to analogue PSTN telephone line
B	Telephone line output for connection to analogue PSTN telephone line
A-1	Telephone line output for connection to other telecom equipment
B-1	Telephone line output for connection to other telecom equipment
⏚	Telecom ground

Before making these connections, **all power must be disconnected** from the system.

<u>Note:</u> The Telecom Ground terminal (TE) should ALWAYS be connected to earth in order to maximise the effectiveness of the transient voltage protection on the unit.

Note that the approvals standard TBR21 clause 4.2 requires connection to be made via an RJ11 plug and socket.

The cable must be fed into the end station housing through the hole provided, protected by the grommet supplied, and secured in place with the cable tie, thus:



<u>Note:</u> PCB layout varies between EURO models, but labelling and connections are identical.

10.4 Programming the Unit

Programming of all telephone numbers, etc. should be carried out as described in the programming manual.

10.5 Initialisation

To ensure correct initialisation after installation, wait for the main power to initialise after powering up, then press the "RESET" button on the end station for approximately 2 seconds.

If this is not done, a "MODEM FAULT" may be indicated.

WARNING

The approval of this product for attachment to the PSTN is void if it is subject to any unauthorised modification, or if used with, or connected to:

Internal software which has not been approved by BABT.

External control software or control equipment which causes the unit to contravene the requirements of telecommunications standards.

10.6 Certification

This product complies with all requirements of the European 'R&TTE Directive' 1999/5/EC for connection to the PSTN. It is approved for use throughout the EU, see 'Declaration of Conformity' on next page.

CE 168

This equipment is thus suitable for single terminal connection to the public switched telephone network (PSTN) throughout Europe. However, due to the differences between the individual PSTNs provided in different countries - and even within a country - the approval does not, of itself, give an unconditional assurance of successful operation on every PSTN network, or compatibility with every possible ring cadence.

When using the modem on ADSL lines, ADSL filters must be fitted. If ADSL filters are used they should be fitted at the telephone line socket.

Should any difficulties be experienced, or it is required to use the unit on another network, please contact your supplier in the first instance.

10.6.1 IMPORTANT NOTICE

The Declaration of Conformity to European R&TTE Directive for this product is valid ONLY when it is correctly installed as described in these instructions.

These instructions are designed to ensure that SAFETY regulations are met, as well as functional and programming aspects. It is therefore essential that these are followed exactly; in particular the telephone cable must be routed and connected correctly.

The product declaration is for use with the following services ONLY:

Multi-Frequency signalling
Auto-Calling
Auto-Clearing

The declaration will be void if used for any other purpose.

The Declaration of Conformity for this product for attachment to the PSTN is void if it is subject to any unauthorised modification, or if used with, or connected to:

Internal software which has not been approved.

External control software or control equipment which causes the unit to contravene the requirements of telecommunications standards

10.6.2 PRODUCT DECLARATION OF CONFORMITY

Manufacturer	Castle, Secure House, Braithwell Way, Hellaby, Rotherham S66 8QY
Details of Equipment	EURO COM9600 Security Communicator/Modem
Declaration	Under our sole responsibility, we hereby declare that the product detailed above conforms with the essential requirements of the directives identified below, having been tested in accordance with the standards mentioned:
EMC Directive 2004/108/EC	EN.50130-4 for Immunity, EN.50081 Part 1 for Emissions
Low Voltage Directive 2006/95/EC	EN.60950
R&TTE Directive 1995/5/EC	CTR.21

The conformity assessment procedure referred to in article 10(3) and Annex II of Directive 1995/5/EC have been followed, with the involvement of the following notified body:
BABT product services, 34 Molesey Road, Walton-on-Thames, Surrey, KT12 4RQ, UK.
Identification Mark: 168

10.7 Communication

The Digi-Modem is suitable for use in systems designed for use with ATS levels 1 or 2 (as defined in prEN50131-1:2004) and environmental class 1 or 2. With the PSTN functioning normally, the ATS will comply with the required performance levels subject to the ARC being suitably equipped.

REMEMBER

The Telecom Ground terminal (TE) should ALWAYS be connected to earth in order to maximise the effectiveness of the transient voltage protection of the unit. Failure to do so will leave the device vulnerable to damage during electrical storms, etc.

DISCLAIMER

EURO panels includes the facility to send electronic signals to an Alarm Receiving Centre (ARC), and also to send SMS text messages to mobile 'phones.

Alarm, etc. signals may be transmitted via a PSTN link, using a variety of formats, to suitable receiving equipment located at the premises of an independently operated Alarm Receiving Centre. The SMS facility uses a PSTN connection to a special SMS Centre, where the information is transferred to the GSM network for delivery to the client's designated mobile telephone(s). The SMSC services are provided by GSM network operators or other reputable companies, whose operation is outside of the control or influence of Castle Care-Tech Ltd.

Castle Control Panels have an embedded premium rate telephone number that is used to contact a Castle host computer prior to commissioning, in order to download the SMSC details and appropriate call routing authorisation. The control panel will continue to contact this CHC at regular intervals, to verify the operation and update and confirm the routing information and authorisation as appropriate. The charge for this service is raised by the use of the "premium rate" telephone number (the bill-payer must be informed of this).

Whilst we will use our best endeavours to resolve any issues relating to these uses of equipment manufactured by us, Castle Care-Tech are in no way responsible for the operation of the PSTN, the Alarm Receiving Centre or the SMSC - or for the end-to-end security and delivery of information and messages involved.

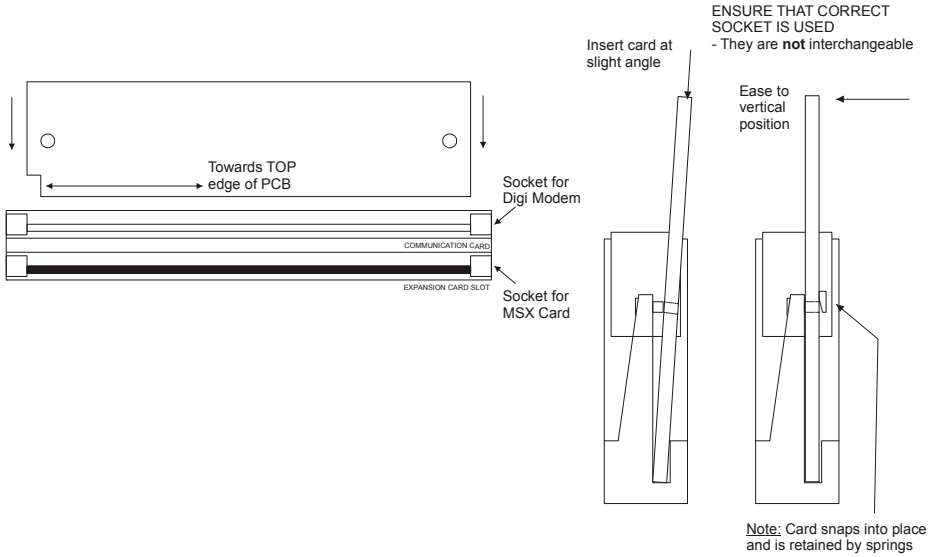
It is the installer's legal obligation to inform the end user of all changes relating to the SMS messaging service.

CHAPTER 11: SYSTEM EXPANSION AND ENHANCEMENT

This chapter highlights the means of providing additional and expanded facilities.
Expansion of the system is by means of 'MSX' cards that slot into the end station to provide enhanced specifications. The four expansion cards for the EURO are the MSX 44, 76, 162 and 280. ***PLEASE NOTE THE EURO 46 CANNOT BE EXPANDED***

11.1 Inserting the MSX Card

The MSX card must be fitted into the correct slot on the end station PCB, as shown:



11.2 Additional Facilities with MSX Cards

11.2.1 RS-232 Connection

A connector is provided on the MSX card to permit direct connection (with an appropriate loom) to the RS-232 serial port of a PC running EURO UDL software in order to provide full Engineer access facilities, etc. from the PC.

11.2.2 System expansion

MSX cards allow for more user codes, increased log size and permit more devices to be fitted to the system.

11.2.3 Output Types

Output type 035 'Follow Input' is only available with an MSX 44, 76, 162 or 280 card fitted.
In addition to the simple 'follow' function, this output type can be programmed (individually) to be active for a specified time or to latch on until reset.
It is also possible to select the output to be active only when the relevant Area (in which the input is located) is set or unset, or to be active always.
A further option permits an output to be programmed to follow a Area, a shunt or a sub-ward, as alternatives to individual inputs.

11.2.4 Autoset

The EURO 76, 162 and 280 allow the facility of 'autoset' which is controlled via the Upload/download software. This feature allows a programmed time and day of when the EURO panel can set and unset.

11.2.5 Gates

AND/OR gates are also available to the EURO 76, 162, 280. These allow additional options using outputs which can be used when more complicated output procedures are needed.

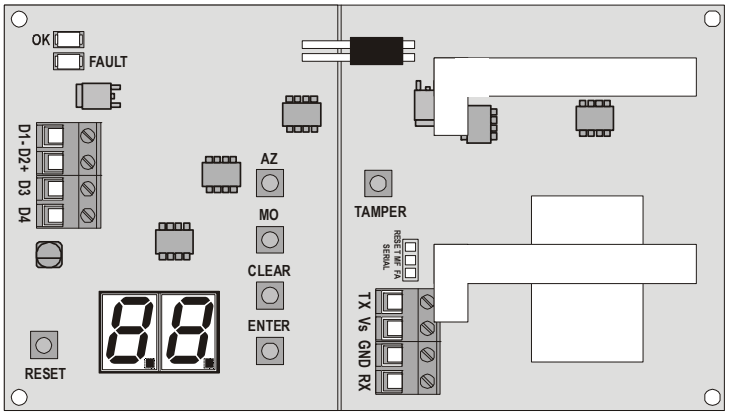
CHAPTER 12: THE RADIO ZEM (INOVONICS)

The radio expander contains the 868 inovonics receiver and programming PCB.

12.1.1 The Radio Expander

The display is 2 x 7 segments and there are 4 control buttons:

'AZ' = Assign zones/repeaters
'MO' = EOL mode or iD mode
'CLEAR' = Clear Information
'ENTER' = Accept Information



A total of 7 detectors can be programmed using the End of Line mode on a radio expander, and 29 can be programmed using the iD mode.

The '**OK**' and '**FAULT**' LEDs relate to the RS485 connection to the EURO system.

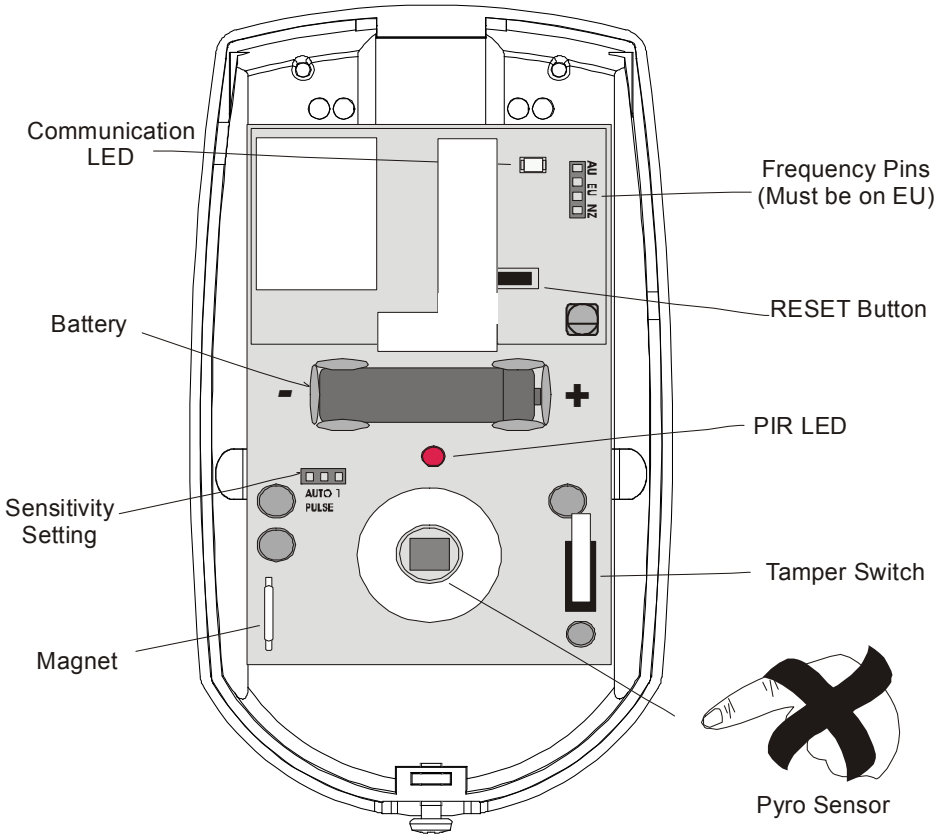
NOTE: The last input on the expander should be programmed as 'Fault' with the name 'RF Low Battery' to indicate a detector low battery problem. If an RF Low Battery is reported then the radio expander will show on the display the number of the detector with the low battery: e.g. Lb…21.

Supervision failure will be reported as 'tamper' on the relevant input.

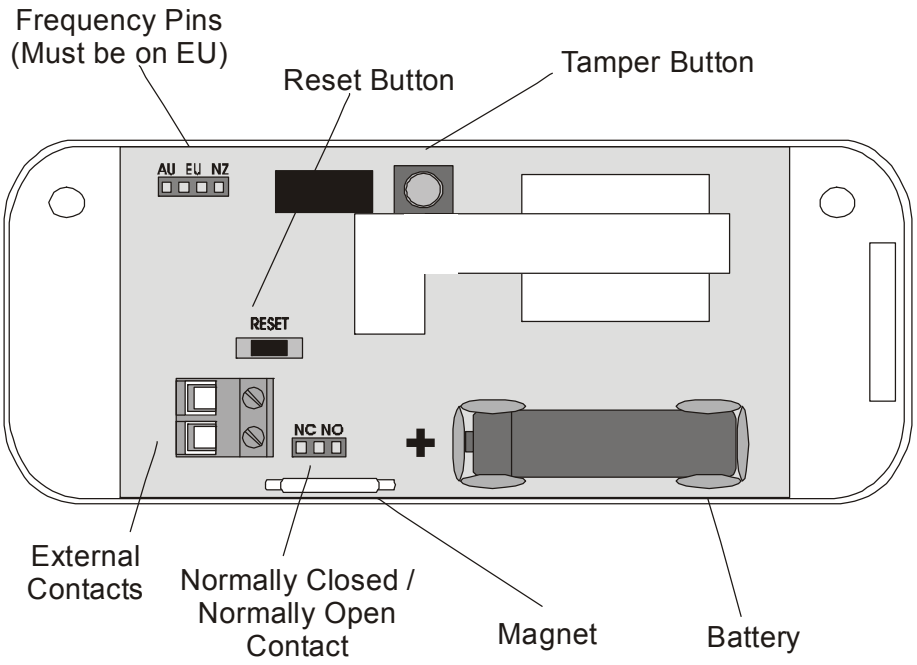
12.1.2 The Radio PIR

Once the Radio PIR has seen an activation, it will then be inactive for four minutes. If the Radio PIR hasn't seen any activation within the four minutes, it will then be active again. This is to save the battery life of the detector.

12.2 The Radio PIR



12.3 The Radio Door Contact

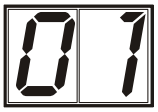
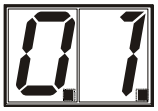


12.4 Addressing the Radio ZEM

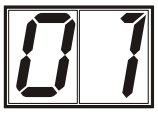
Once a radio expander is installed on the system in must be enabled at both the radio expander and the EURO system. To perform this at the system you will need to go to 'Install ZEM', see the programming manual. To enable this at the radio expander, follow the instructions below:

➢ Hold down the '**ENTER**' button until the mode and address are displayed. *"E0"* = means End of Line mode, Address 0. *"I0"* = means iD mode, Address 0. ➢ Press the **'MO'** button on the detector to toggle between End of Line and iD modes.	ENTER	
➢ Press the **'AZ'** button to select the Wireless Input Expander address number. ➢ Press the **'ENTER'** to confirm your selection.	AZ	

12.5 Assigning Radio Detectors

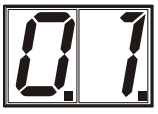
➢ Press the '**AZ**' and scroll to the input number you wish to assign a wireless detector to:	AZ	
➢ Press the ''**RESET**' button on the detector you wish to assign to that particular input. *Ensure that the jumper on the detector PCB is placed in the "EU" position.* When the detector is assigned, the two dots on the display with flash.		

12.6 Deleting Radio Detectors

➢ Press the '**AZ**' and scroll to the input number you wish to delete.	AZ	
➢ Press the ''**CLEAR**' button. The dots should have cleared, indicating the detector has been deleted.	CLEAR	

12.7 Display the Signal Strength

The radio expander can monitor the signal of the detectors connected onto the system:

➢ Press the '**AZ**' and scroll to the input number you wish to check. The display will show the input number and two dots.	AZ	
➢ Activate the detector and the signal strength will be displayed (0-99). If it is below 14, use a REPEATER to boost the signal.		

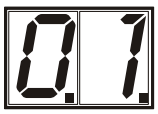
12.8 Assigning Repeaters to the Expander

The radio repeaters act as a 'Range Expander' and helps a system scale from smaller commercial sites to large campuses with several buildings. Note: ***Repeaters will use an input from the radio expander.***

➢ Press the '**AZ**' and scroll to the input number you wish to assign a repeater. To assign the REPEATER to that input, power the repeater when the input number is displayed, and one dot will flash to confirm. To remove a repeater from that input, press **'CLEAR'**	AZ	

12.9 Supervision Time

The supervision time is the time of monitoring each detector on the radio expander.

➢ Press the '**AZ**' and scroll to the input number you wish to check. The display will show the input number and two dots.	AZ	
➢ With the input number displayed, press the **'MO'** button to change the supervision time to (a number will be displayed, ignore this, just follow the dots) 30 minutes (no dots) / 30 hours (1 dot) / 30 days (2 dots)	MO	

12.10 Problem Solving

One of the most frequent problems in not being able to assign the detectors to the Radio Expander is that the jumper on the detector PCB has not been put in place on the 'EU' pins. This makes sure the transmitter transmits at the correct 868MHz frequency which the input expander uses.

Make sure that the 'serial' jumper on the radio expander is in the 'MF' position.

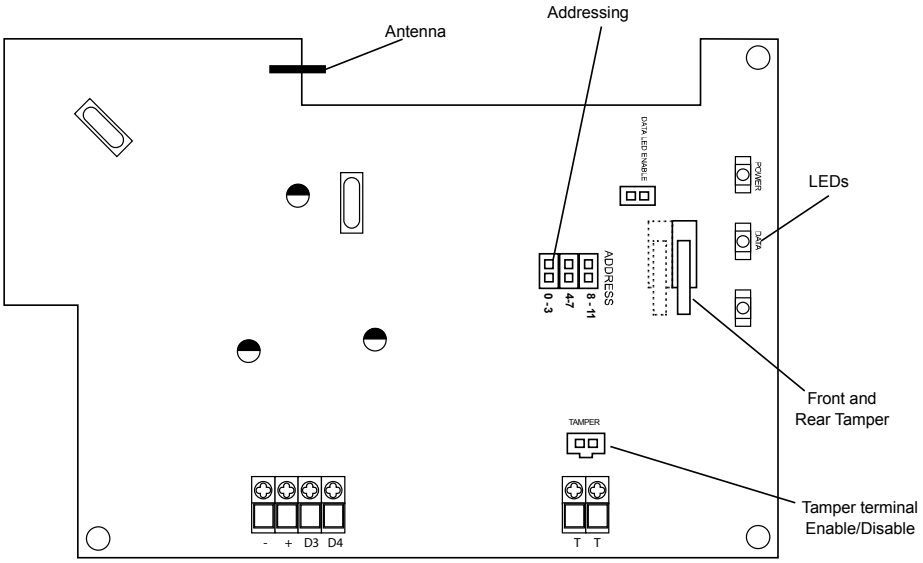
If there is "33" displayed on the screen and can't be cleared, it is because the expander has been selected for "A0" not "E0". You will need to power down the expander,disconnect the D3 and D4 terminals, power up and then reconnect and re-address the expander.

12.11 Technical Specification

THE RADIO EXPANDER	
Radio:	Inovonics Wireless EchoStream using Pan-European 868MHz
Housing Material:	ABS
Closure:	Latching with optional screws for high security installs
Dimensions:	162.0 x 91.4 x 27.9 mm
Weight:	204 grammes
Power Requirements:	12-24V AC or DC
Battery Capacity:	1800mAH at 3.7V
Back-up Battery Life:	24 hours typical
Operating Environment:	0° - 60° C up to 90% relative humidity (non-condensing)
Batt. Charger Operating Environment:	0° - 40° C
Conformity:	Meets or exceeds EN50131-5-3 at grade 2

CHAPTER 13: EURO-ZEM32-WE

Each Enforcer EURO-ZEM32-WE allows 32 wireless inputs. The first EURO-ZEM32-WE on a system allows 2 wireless bells and 32 keyfobs to be learnt (this is the maximum that can be learnt on a system). Please note this can only be installed on a Version 9 EURO system.



13.1 Overview

The first Wireless ZEM can have 32 Wireless Inputs, 32 Wireless Keyfobs and 2 Wireless Bells learnt to it. Every Wireless ZEM after the first may only have Wireless Inputs learnt. A maximum of 3 Wireless ZEMs may be programmed onto the EURO system. Each Wireless ZEM is programmed as 4 different ZEMs in the programming menu, and they each have 8 Wireless Inputs assigned. Here is an example of how 2 Wireless ZEMs, fully loaded, can operate on the EURO system:

Wireless ZEM 1. Address: 0-3:

Total Wireless Inputs: 32 (***Address 0*** = 8 Wireless Inputs (1-8), ***Address 1*** = 8 Wireless Inputs (9-16), ***Address 2*** = 8 Wireless Inputs (17-24) and ***Address 3*** = 8 Wireless Inputs (25-32)).

Total Wireless Keyfobs: 32. **Total Wireless Bells:** 2

Wireless ZEM 2. Address: 4-7:

Total Wireless Inputs: 32 (***Address 0*** = 8 Wireless Inputs (32-40), ***Address 1*** = 8 Wireless Inputs (41-48), ***Address 2*** = 8 Wireless Inputs (49-57) and ***Address 3*** = 8 Wireless Inputs (58-64)).

Wired ZEMs and Wireless ZEMs can be installed together on a system and as long as they are addressed uniquely, they will work alongside each other. For example, if you wish to use 24 wireless inputs and 8 wired inputs, you can address the Wireless ZEM as ZEM 0,1 and 2 in the programming function 'Install ZEM' and learn 24 inputs to the system using the 'Wireless Device Control' menu (see the Programming Manual for further information). Then address a wired ZEM as ZEM 3.

13.2 LEDs

There are two GREEN LEDs that will illuminate on the printed circuit board:

POWER LED: This will illuminate when there is the correct voltage at the – and + terminals.

DATA LED: This will illuminate when there is communication between the wireless ZEM and any wireless device. *It is possible to disable this LED via the "Disable data LED" header.*

13.3 Connection

Connecting a wireless ZEM is done in the same way as connecting a wired ZEM. Please see page: 113.

13.4 Wireless ZEM Addressing / Input Mapping

Wireless ZEM	Address	Inputs	Keyfobs	Bells
ZEM Number 1	*ZEM Address 0*	*9-16*	32	2
	ZEM Address 1	*17-24*		
	ZEM Address 2	*25-32*		
	ZEM Address 3	*33-40*		
ZEM Number 2	*ZEM Address 4*	*41-48*	-	-
	ZEM Address 5	*49-56*		
	ZEM Address 6	*57-64*		
	ZEM Address 7	*65-72*		
ZEM Number 3	*ZEM Address 8*	*73-80*	-	-
	ZEM Address 9	*81-88*		
	ZEM Address 10	*89-96*		
	ZEM Address 11	*97-104*		

13.5 Wireless ZEM Header Addressing

Wireless ZEM	Address	0-3	4-7	8-11
ZEM Number 1	*ZEM Address 0*	ON	OFF	OFF
	ZEM Address 1	ON	OFF	OFF
	ZEM Address 2	ON	OFF	OFF
	ZEM Address 3	ON	OFF	OFF
ZEM Number 2	*ZEM Address 4*	OFF	ON	OFF
	ZEM Address 5	OFF	ON	OFF
	ZEM Address 6	OFF	ON	OFF
	ZEM Address 7	OFF	ON	OFF
ZEM Number 3	*ZEM Address 8*	OFF	OFF	ON
	ZEM Address 9	OFF	OFF	ON
	ZEM Address 10	OFF	OFF	ON
	ZEM Address 11	OFF	OFF	ON

13.6 Popular Wireless Peripherals

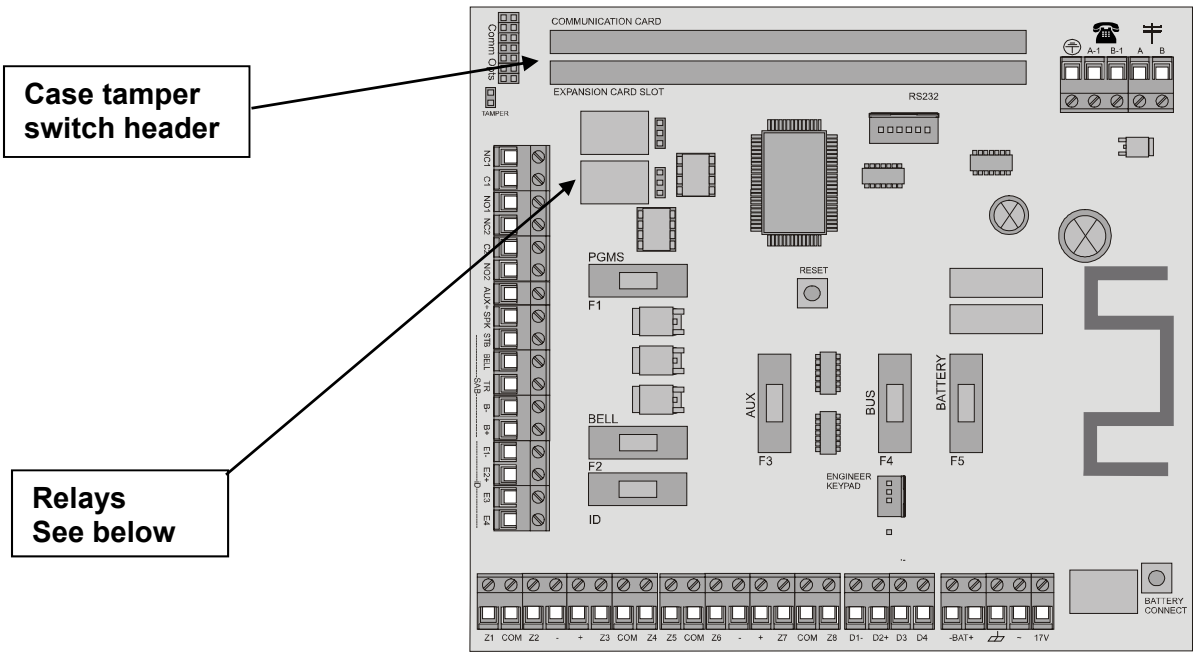
KX12DT-WE:	Two Way Wireless 12m Dual Technology detector	**MC2-WE**	Two Way Wireless magnetic contact with 2 reed & tamper input
KX12DQ-WE:	Two Way Wireless 12m Digital PIR	**SHOCK-WE**	Two Way Wireless Shock Sensor
KX10DP-WE:	Two way wireless 10m Digital Pet Immune	**SMOKE-WE**	Two Way Wireless Smoke Sensor
DELTABELL-WE:	Two Way Wireless External Siren	**KF4-WE**	Two Way Wireless Keyfob

13.7 Learning

For information about how to learn a Wireless Device to the Wireless ZEM please refer to the 'Wireless Device Control' section in the Programming Manual. Note: Keyfobs are learnt in 'Change Codes' in the Master Manager menu.

CHAPTER 14: WIRING DIAGRAMS

14.1 The EURO 76 Printed Circuit Board



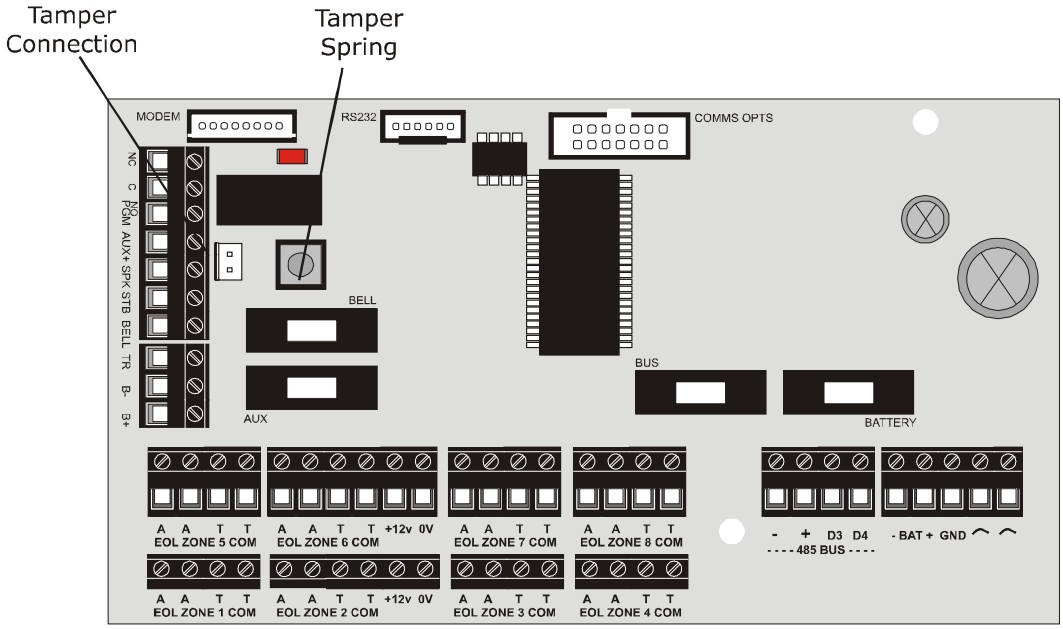
NO1	Output 1 Relay Normally Closed	**COM**	Input Common
C1	Output 1 Relay Common Output	**Z6**	Programmable Input 6
NC1	Output 1 Relay Normally Open	**Z7**	Programmable Input 7
NO2	Output 2 Relay Normally Closed	**COM**	Input Common
C2	Output 2 Relay Common Output	**Z8**	Programmable Input 8
NC2	Output 2 Relay Normally Open	**D1**	RS485 0V Supply
AUX+	Auxiliary Supply	**D2**	RS485 +12V Supply
SPK	Speaker (Dedicated output)	**D3**	RS485 'A' Data
STB	Strobe Output	**D4**	RS485 'B' Data
BELL	Bell Output	**-BAT**	Battery Negative Terminal
TR	Siren Tamper	**BAT+**	Battery Positive Terminal
B-	Auxiliary 0V Supply	**GND**	Earth
B+	Auxiliary +12V Supply	**17V~**	17V AC Supply
Z1	Programmable Input 1	**A**	For Connection to Telephone Network
COM	Input Common	**B**	For Connection to Telephone Network
Z2	Programmable Input 2	**A-1**	For connection to other tel equipment
-	Auxiliary 0V Supply	**B-1**	For connection to other tel equipment
+	Auxiliary +12V Supply	⏚	Telephone Earth
Z3	Programmable Input 3	**E1-**	Auxiliary 0V Supply
COM	Input Common	**E2+**	Auxiliary +12V Supply
Z4	Programmable Input 4	**E3**	iD Line (Blue)
Z5	Programmable Input 5	**E4**	iD Line (Yellow)

14.1.1 Relay Terminals:

	If the jumper is on the top two pins then the relay is negative.		If the jumper is on the bottom two pins then the relay is positive.

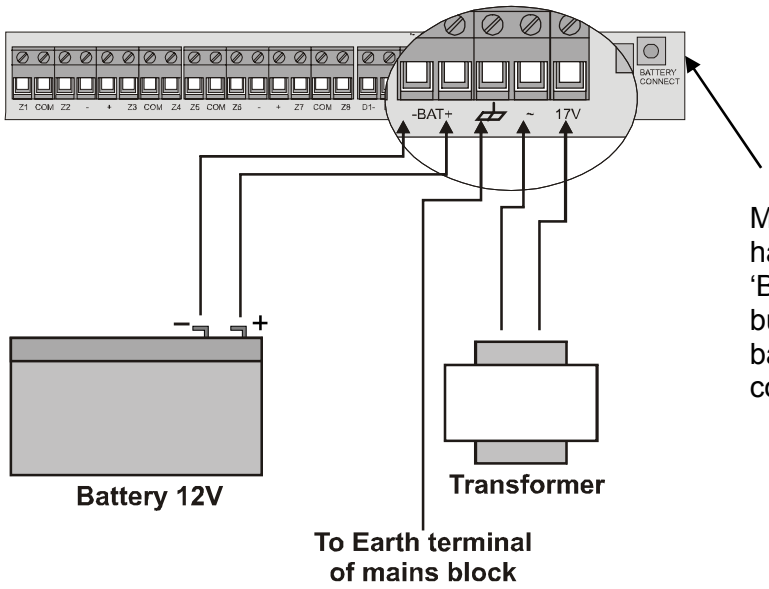
Without the jumpers on the pins the relays are voltage free and if operated will need 'C1' and 'C2' linked to a negative or positive.

14.2 The EURO 46 Printed Circuit Board



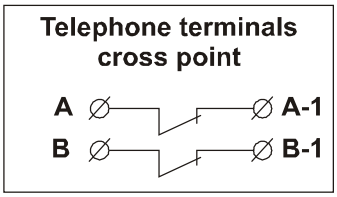
NC	PGM Relay Normally Closed	**Z6**	Programmable Input 6
C1	PGM Relay Common	**Z7**	Programmable Input 7
NC1	PGM Relay Normally Open	**Z8**	Programmable Input 8
AUX+	Auxiliary Supply	**A**	Alarm terminal
SPK	Speaker (Dedicated output)	**A**	Alarm terminal
STB	Strobe Output	**T**	Tamper terminal
BELL	Bell Output	**T**	Tamper terminal
TR	Tamper Return	**D1**	RS485 0V Supply
B-	Auxiliary 0V Supply	**D2**	RS485 +12V Supply
B+	Auxiliary +12V Supply	**D3**	RS485 'A' Data
Z1	Programmable Input 1	**D4**	RS485 'B' Data
Z2	Programmable Input 2	**-BAT**	Battery Negative Terminal
0V	Auxiliary 0V Supply	**BAT+**	Battery Positive Terminal
+12V	Auxiliary +12V Supply	**GND**	Earth
Z3	Programmable Input 3	**~**	17V AC Supply
Z4	Programmable Input 4	**~**	17V AC Supply
Z5	Programmable Input 5		

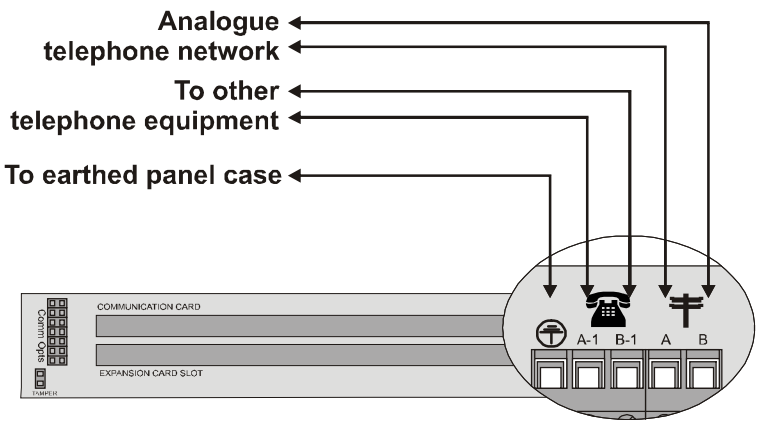
14.3 Power Supply Wiring



Make sure you have pressed the 'Battery Connect' button once the battery is connected.

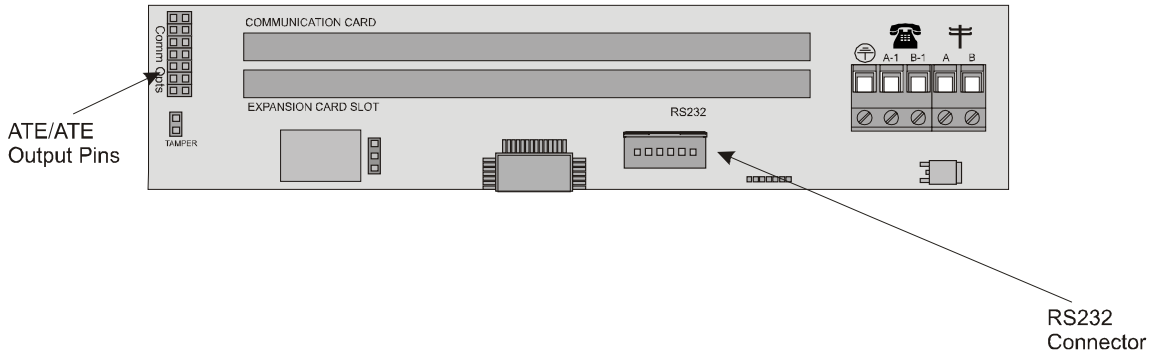
14.4 Telephone Line Wiring





NOTE: Terminals A-1 and B-1 are used for connecting to telephone line equipment which will automatically be disconnected from the telephone line during dial out and UDL session

14.5 STU/ATE and RS232 Connections



14.5.1 RS232 Connector

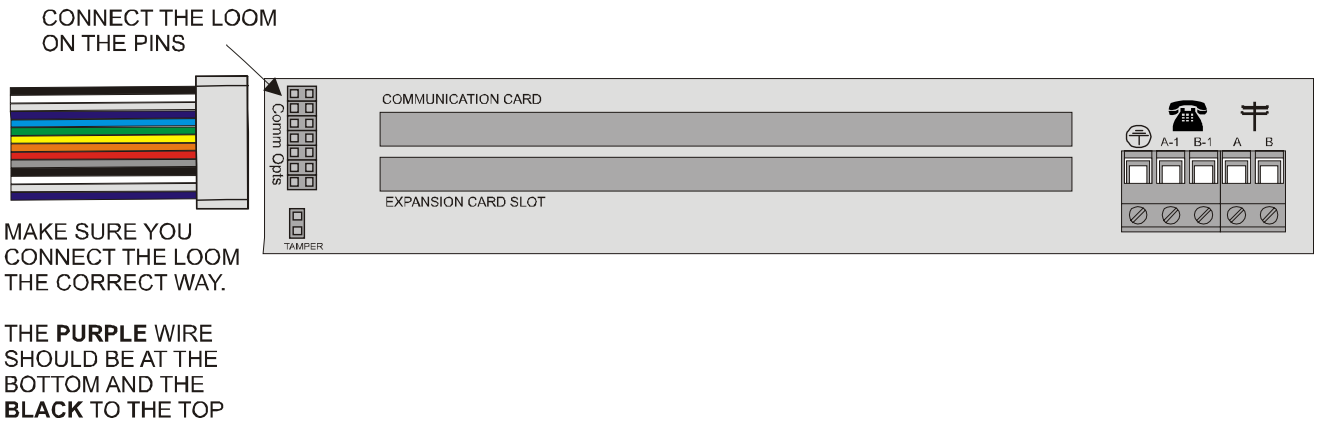
The RS232 connector is used to connect an RS232 lead via a PC/Laptop. This enables the engineer to upload/download information from the panel using the UDL Software. Please note that the connector on the PCB is disabled when a MSX card is installed, the RS232 connection on the MSX card should then be used.

Please contact Castle Care Tech or your local distributor regarding the UDL software.

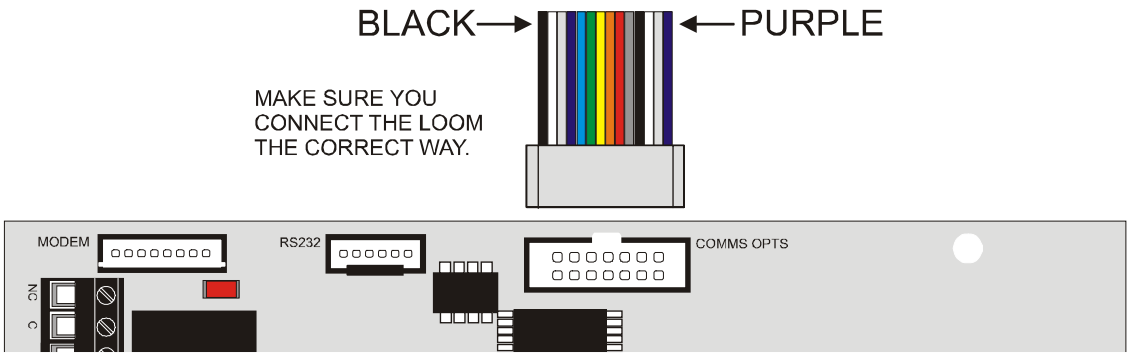
14.5.2 Connecting the Communication Loom

MAKE SURE THE COMMUNICATION LOOM IS CONNECTED AS SHOWN BELOW:

Connecting the communication loom to the EURO 76



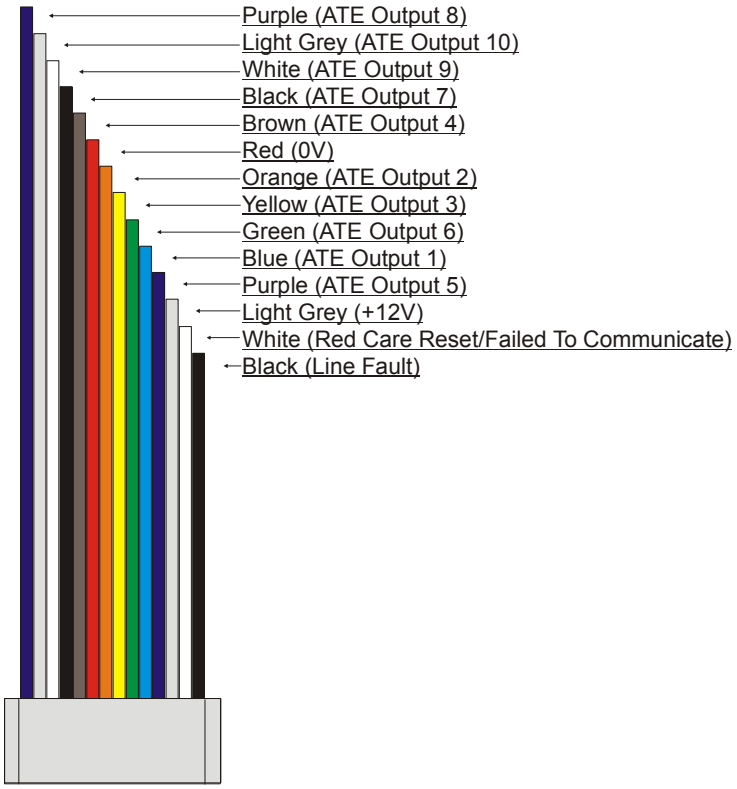
Connecting the communication loom to the EURO 46

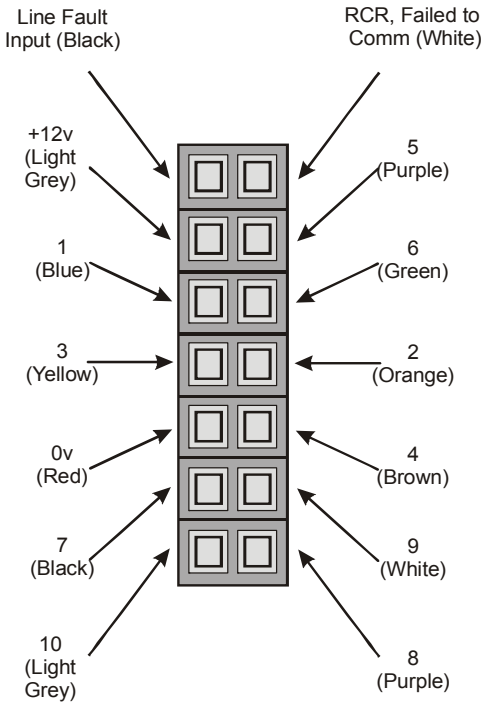


14.5.3 STU/ATE Output Pins

Digi Channel	EURO 46/76/162/280
1	Fire (0001)
2	HU Device Any (0009)
3	Unconfirmed Any (0018)
4	Final Set All (0004)
5	Tamper Any (0007)
6	Omit Rearm Any (0017)
7	Confirmed Any (0006)
8	Mains Fail (0052)
9	Global Fault 2 (0056)
10	Test ATS (0064)

14.5.4 STU/ATE Plug-On Loom Diagram and Connector Pins



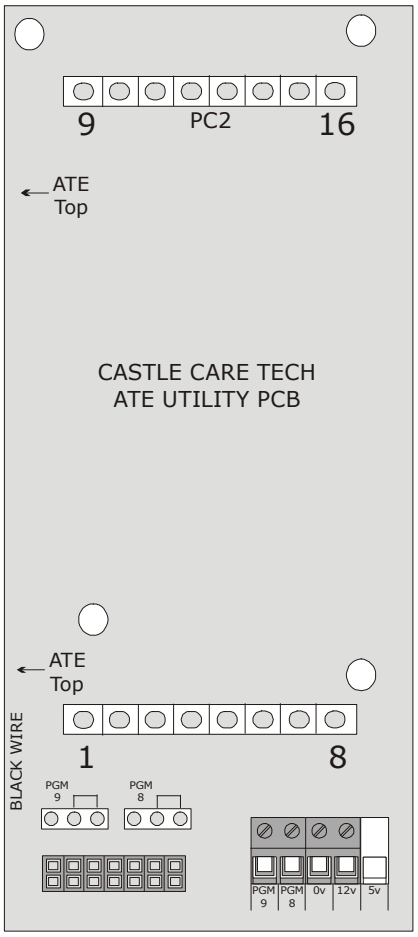


For programming / changing the ATE outputs please see '**CHANGE OUTPUTS'** in the programming manual.

Please note that ATS Output 10 can only be used as any output type if the Line Fault (Black wire) is disconnected. If the Line Fault is connected then 'Test ATS (0064)' can only be used.

14.6 The ATE Utility Board

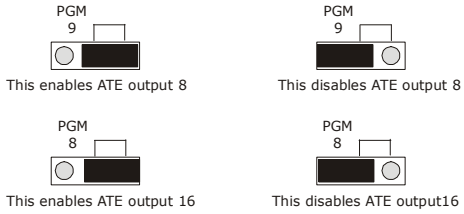
The ATE Utility Board facilitates the use of plug-on communicating devices to the EURO panel. This is supplied with the EURO 76, but can also be bought separately and connected to the 76, 162 or 280.



SITE OPTIONS
ATE PINS INVERTED = 'YES'

Pin 1 = Fire (ATE OP 1) = 5V
Pin 2 = HU Device Any (ATE OP 2) = 5V
Pin 3 = Unconfirmed Any (ATE OP 3) = 5V
Pin 4 = Final Set All (ATE OP 4) = 5V
Pin 5 = Tamper Any (ATE OP 5) = 5V
Pin 6 = Red Care Reset Input = 0V
Pin 7 = 0V
Pin 8 = Global Fault 2 (ATE OP 9) = 5V
Pin 9 = 13V RAIL
Pin 10 =0V RAIL
Pin 11 = Test ATS (ATE OP 10) = 5V
Pin 12 = 5V RAIL
Pin 13 = Confirm Any (ATE OP 6) = 5V
Pin 14 = Omit Rearm (ATE OP 7) = 5V
Pin 15 = Line Fault = 0V
Pin 16 = Mains Fail (ATE OP 8) = 5V

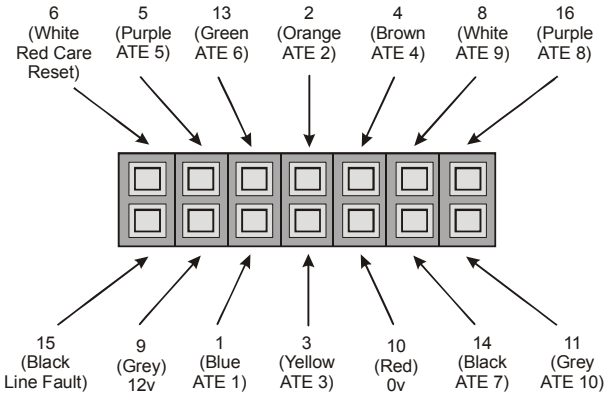
IF ATE PINS INVERTED = 'NO'
ALL PINS ARE AT 0V EXCEPT P9



PGM 9 is an output which will follow ATE pin 8.
PGM 8 is an output which will follow ATE pin 16.

When PGM 9 is disabled, ATE pin 8 is disabled. (PGM 9 terminal still active)
When PGM 8 is disabled, ATE pin 16 is disabled. (PGM 8 terminal still active)

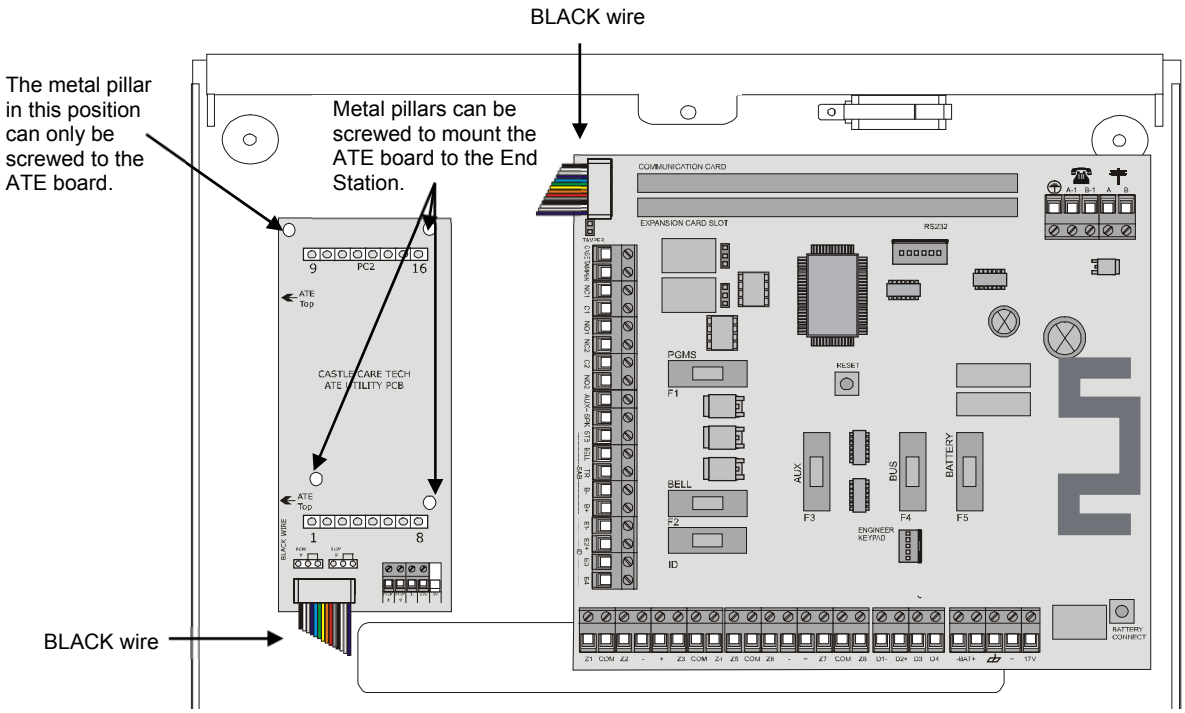
The pins at the bottom of the board that connect the communication loom correspond to the ATE outputs as follows:



Please note that ATS Output 10 can only be used as any output type if the Line Fault (Pin 15) is disconnected. If the Line Fault is connected then 'Test ATS (0064)' can only be used.

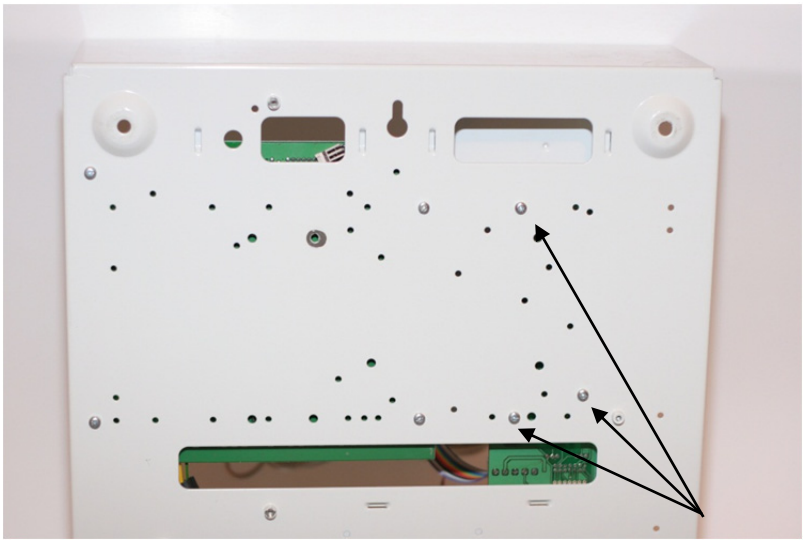
14.6.1 Installing the ATE Utility Board

The ATE Utility Board only comes with the EURO 76 control panel. If this item is purchased separately, it can be connected to a EURO 46 (large casing) to the 'Communication Output' connection. If the ATE utility board is required for the EURO 46 small panel, a separate housing and power supply will be needed.



Metal pillars and screws are supplied in the EUR-105 kit, and these must be used to secure the Utility Board to the metal endstation housing. The diagram above shows which holes are to be used and how they match up between the carrier board and the metal box.

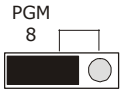
Pillars marked in black on the diagram above are screwed to both the Carrier Board PCB (from the front) and the metal endstation (from the back). The fourth pillar marked white in the diagram above is screwed to the Carrier Board PCB from the front only.



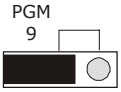
The photograph above shows the locations of the pillar screws from the reverse of the panel.

14.6.2 Setting up a GSM STU or Digi/Dualcom

- Make sure the jumpers are in the following positions on the ATE utility board. (Failure to put PGM9 jumper in correct position will result in tampers being signalled on the low battery channel. Failure to put PGM 8 jumper in the correct position will result in mains fail being signalled on the Test ATS channel.



This disables ATE output16



This disables ATE output 8

- Link PGM 8 terminal on ATE Utility board to terminal 'F' on the STU (Mains Fail terminal) or appropriate terminal on dualcom.
- Link PGM 9 terminal on ATE Utility board to terminal 'T' on STU (Tamper terminal) or appropriate on Dualcom.
- On the GSM-STU, place jumper in position P11 on LK2. (Failure to do this will result in the STU not picking up the TEST ATS Output)

Programming a GSM STU or Digi/Dualcom			
STU Channel	Output Type	ATE Output No.	ATE Utility Board Pin No
1	Fire (0001)	ATE OP 1	1
2	HU Device Any (0009)	ATE OP 2	2
3	Unconfirmed (0018)	ATE OP 3	3
4	Final Set All (0004) µ	ATE OP 4	4
5	Tamper Any (0007)*	ATE OP 5	5
6	Omit Rearm Any (0017)	ATE OP 6	13
7	Confirmed Any (0006)	ATE OP 7	14
13	Mains Fail (0052)*	ATE OP 8	16
12	Global Fault 2 (0056)	ATE OP 9 ±	8
10/11	Test ATS (0064)	ATE OP 10	11
Inputs			
RedCare Reset (STU Only)/Fail to communicate		See Note $	6
Line Fault		See Note $	15
Supply			
	+12V Supply	-	9
	0V Supply	-	10

µ If you are using the panel in level setting mode, this must be changed to Final Set Any (type 0022). Alternatively, it should be changed to Misoperation (0005) if set/unset monitoring is not required.

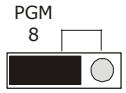
$ Inputs are configured to accept +ve triggers (5V). These inputs MUST be enabled in Site Options. To obtain a Redcare reset input select "STU" or to obtain a Fail to Communicate output, select "Digi"

± If ATE requires digi reset output, programme ATE OP 8 as Initialise Digi (00060)

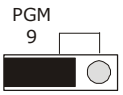
***** Do not change these when using a GSM STU

14.6.3 Setting up a 3GSTU

- Make sure the jumpers are in the following positions on the ATE utility board. (Failure to put PGM9 jumper in correct position will result in tampers being signalled on the low battery channel. Failure to put PGM 8 jumper in the correct position will result in mains fail being signalled on the Test ATS channel.



This disables ATE output16



This disables ATE output 8

- On the 3GSTU, place jumper in position 5 or 7 on LK2. This will select whether you send channels 5 or 7 on the STU.

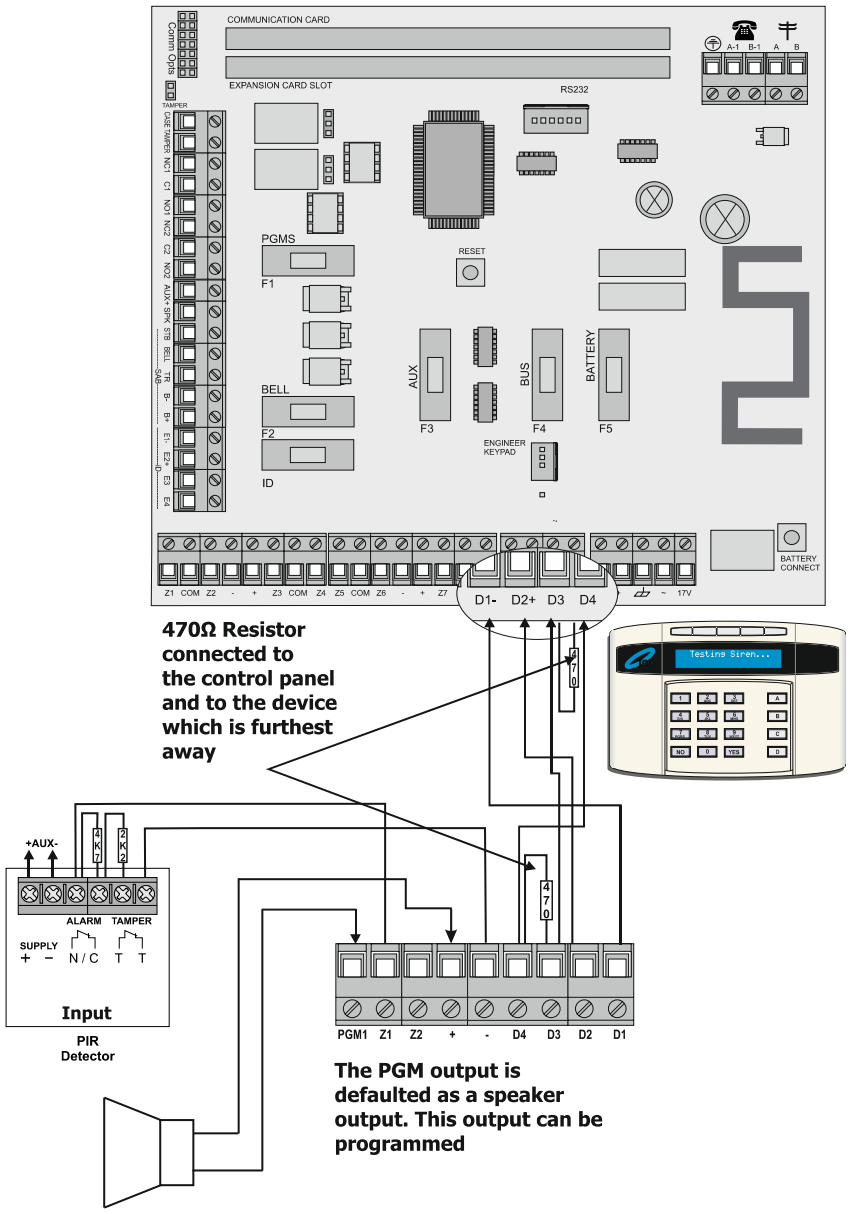
Programming a GSM STU or Digi/Dualcom			
STU Channel	Output Type	ATE Output No.	ATE Utility Board Pin No
1	Fire (0001)	ATE OP 1	1
2	HU Device Any (0009)	ATE OP 2	2
3	Unconfirmed (0018)	ATE OP 3	3
4	Final Set All (0004) µ	ATE OP 4	4
5 or 7	Tamper Any (0007)*	ATE OP 5	5
6	Omit Rearm Any (0017)	ATE OP 7	14
(8) if available	Mains Fail (0052)	ATE OP 8	16
Inputs			
RedCare Reset (STU Only)/Fail to communicate		See Note $	6
Line Fault		See Note $	15
Supply			
	+12V Supply	-	9
	0V Supply	-	10

µ If you are using the panel in level setting mode, this must be changed to Final Set Any (type 0022). Alternatively, it should be changed to Misoperation (0005) if set/unset monitoring is not required.

$ Inputs are configured to accept +ve triggers (5V). These inputs MUST be enabled in Site Options. To obtain a Redcare reset input select "STU" or to obtain a Fail to Communicate output, select "Digi"

14.7 Keypads Wiring

14.7.1 Connecting the Contemporary Keypad



14.7.2 Addressing the Keypads

To Address The Keypads Individually.

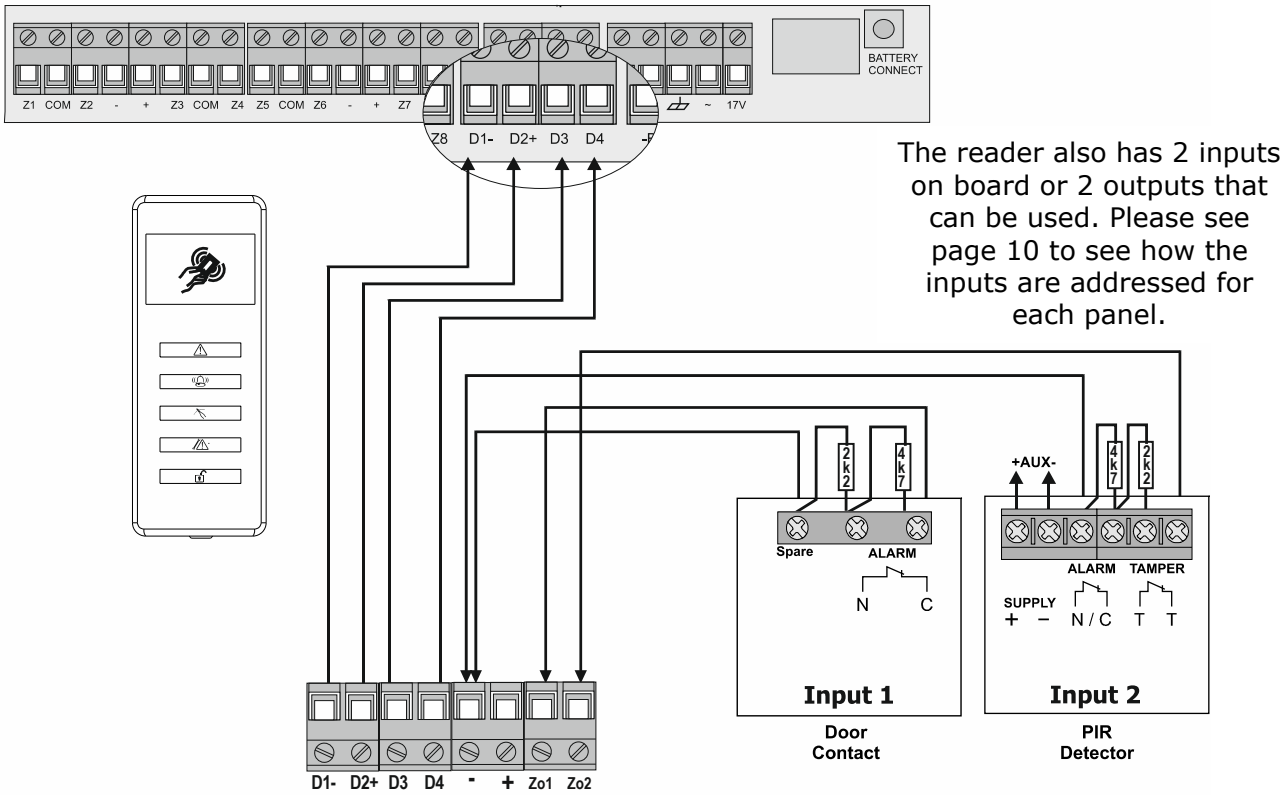
- Press the [D] key.
- "Enter Your Code" will be displayed.
- Press and hold the [D] key.
- Until the display shows "ENTER CODE"
- Enter [2][0][0][0] and address the keypad as you wish.
- Press the [YES] key for additional options, or press the [A] key to save the data.

Make sure that the keypad is enabled correctly in the engineers menu as well (Assign Keypads/Readers)

The keypad also has 2 inputs on board and an output that can be used. Please see page 10 to see how the inputs are addressed for each panel.

14.8 The Internal Tag Reader

14.8.1 Connecting the Internal Tag Reader



14.8.2 Addressing the Internal Tag Reader

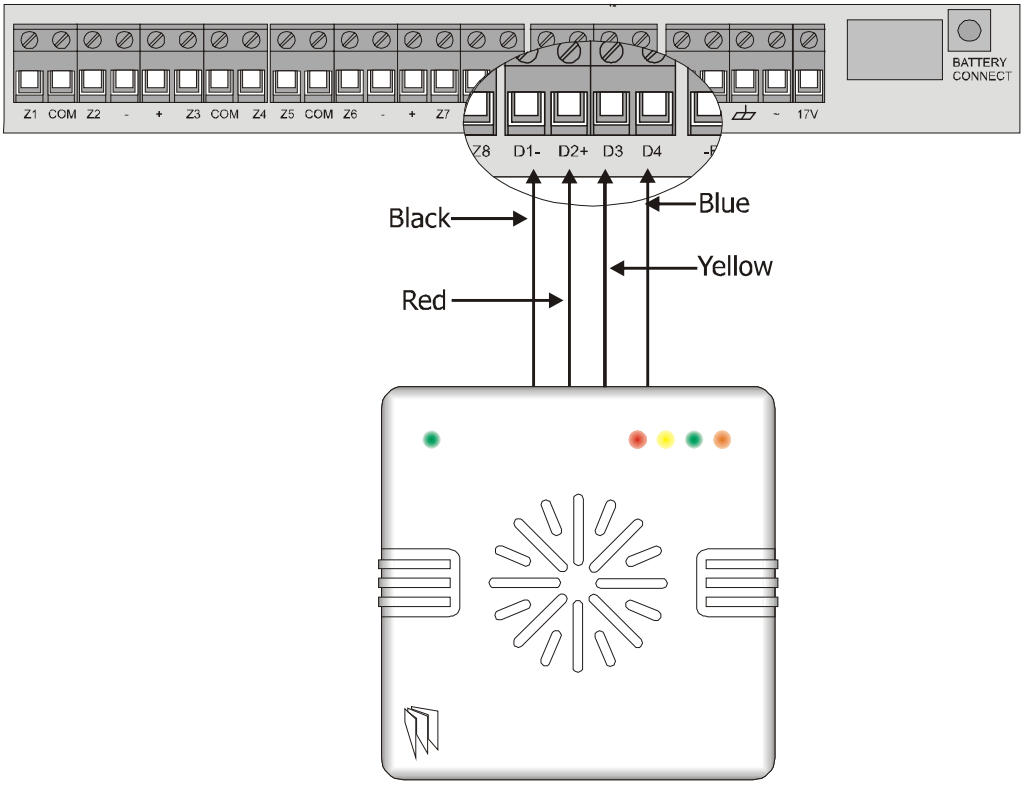
NOTE: Tag Readers are addressed using the address selection switches on the PCB. Open the links to add up to the address as shown in the following table.

Switch	1	2	4	8	16	32	Switch	1	2	4	8	16	32
0	OFF	OFF	OFF	OFF	OFF	OFF	17	ON	OFF	OFF	OFF	ON	OFF
1	ON	OFF	OFF	OFF	OFF	OFF	18	OFF	ON	OFF	OFF	ON	OFF
2	OFF	ON	OFF	OFF	OFF	OFF	19	ON	ON	OFF	OFF	ON	OFF
3	ON	ON	OFF	OFF	OFF	OFF	20	OFF	OFF	ON	OFF	ON	OFF
4	OFF	OFF	ON	OFF	OFF	OFF	21	ON	OFF	ON	OFF	ON	OFF
5	ON	OFF	ON	OFF	OFF	OFF	22	OFF	ON	ON	OFF	ON	OFF
6	OFF	ON	ON	OFF	OFF	OFF	23	ON	ON	ON	OFF	ON	OFF
7	ON	ON	ON	OFF	OFF	OFF	24	OFF	OFF	OFF	ON	ON	OFF
8	OFF	OFF	OFF	ON	OFF	OFF	25	ON	OFF	OFF	ON	ON	OFF
9	ON	OFF	OFF	ON	OFF	OFF	26	OFF	ON	OFF	ON	ON	OFF
10	OFF	ON	OFF	ON	OFF	OFF	27	ON	ON	OFF	ON	ON	OFF
11	ON	ON	OFF	ON	OFF	OFF	28	OFF	OFF	ON	ON	ON	OFF
12	OFF	OFF	ON	ON	OFF	OFF	29	ON	OFF	ON	ON	ON	OFF
13	ON	OFF	ON	ON	OFF	OFF	30	OFF	ON	ON	ON	ON	OFF
14	OFF	ON	ON	ON	OFF	OFF	31	ON	ON	ON	ON	ON	OFF
15	ON	ON	ON	ON	OFF	OFF	32	OFF	OFF	OFF	OFF	OFF	ON
16	OFF	OFF	OFF	OFF	ON	OFF							

The internal tag reader can also be used to control access doors, please see page: 125

14.9 The External Prox Reader

14.9.1 Connecting the External Prox Reader



14.9.2 Programming the RED LED to follow an Output.

The RED LED on the external prox reader can be programmed so that it follows an output. To achieve this, go to 'CHANGE OUTPUTS' and then 'Reader Ouputs' and program the first Output output (PGM1) to whichever type is required. For example you may want the Prox to show the system set, therefore you can use the output "0204: Final Set A". The RED LED will then be illuminated once Area A has set.

14.9.3 Addressing the External Prox Reader

The brown, green and orange wires are used to address the external proximity reader. Depending on which wires are shorted to ground (black wire) or left floating, the proximity reader can be addressed as shown in the table below:

Address	Brown	Orange	Green
0*	GND	GND	GND
1	GND	GND	NU
2	GND	NU	GND
3	GND	NU	NU
4	NU	GND	GND
5	NU	GND	NU
6	NU	NU	GND
7	NU	NU	NU

Key: GND = shorted to ground, NU = Not Used – leave disconnected

NOTE: The proximity reader is addressed in the same number sequence as keypads and internal tag readers.

*Address 0 is not used (reserved for principal keypad).

Make sure that the reader is addressed correctly in the engineers menu as well (Assign Keypads/Readers)

The external proximity reader comes complete with 3m of cable, for connecting to a junction box. The colour coding of the cable is as follows:

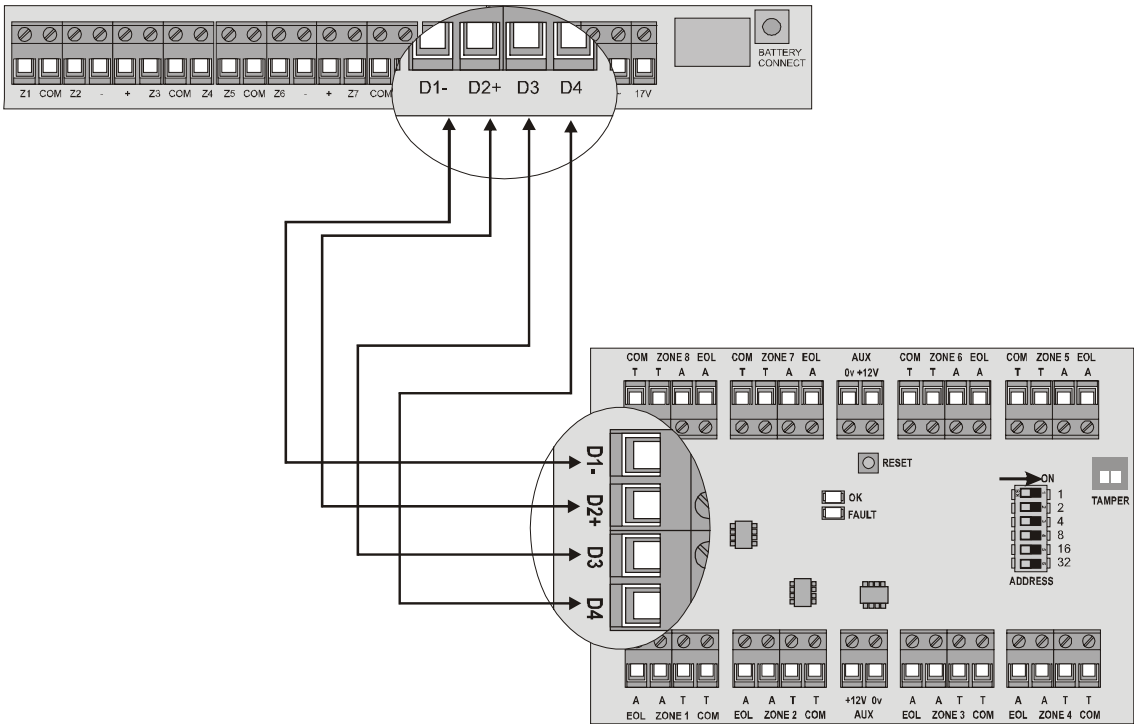
Black	D1 (0V)
Red	D2 (+12v)
Yellow	D3 (Data Bus A)
Blue	D4 (Data Bus B)
White	Not Used
Brown	Used for addressing
Green	Used for addressing
Orange	Used for addressing

The external tag reader can also be used to control access doors, please see page: 125

14.10 Remote Input Expander

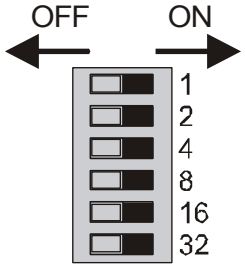
The ZEM8 enables the expansion of inputs. The ZEM8 has only 8 inputs on board. This cannot be plugged onto an Intelligent PSU.

14.10.1 Connecting the ZEM8



14.10.2 Addressing the ZEM8

ZEMs are addressed using the DIP switches on the PCB. The DIP switches operate as follows:



Switches should be On or Off as shown in the following table:

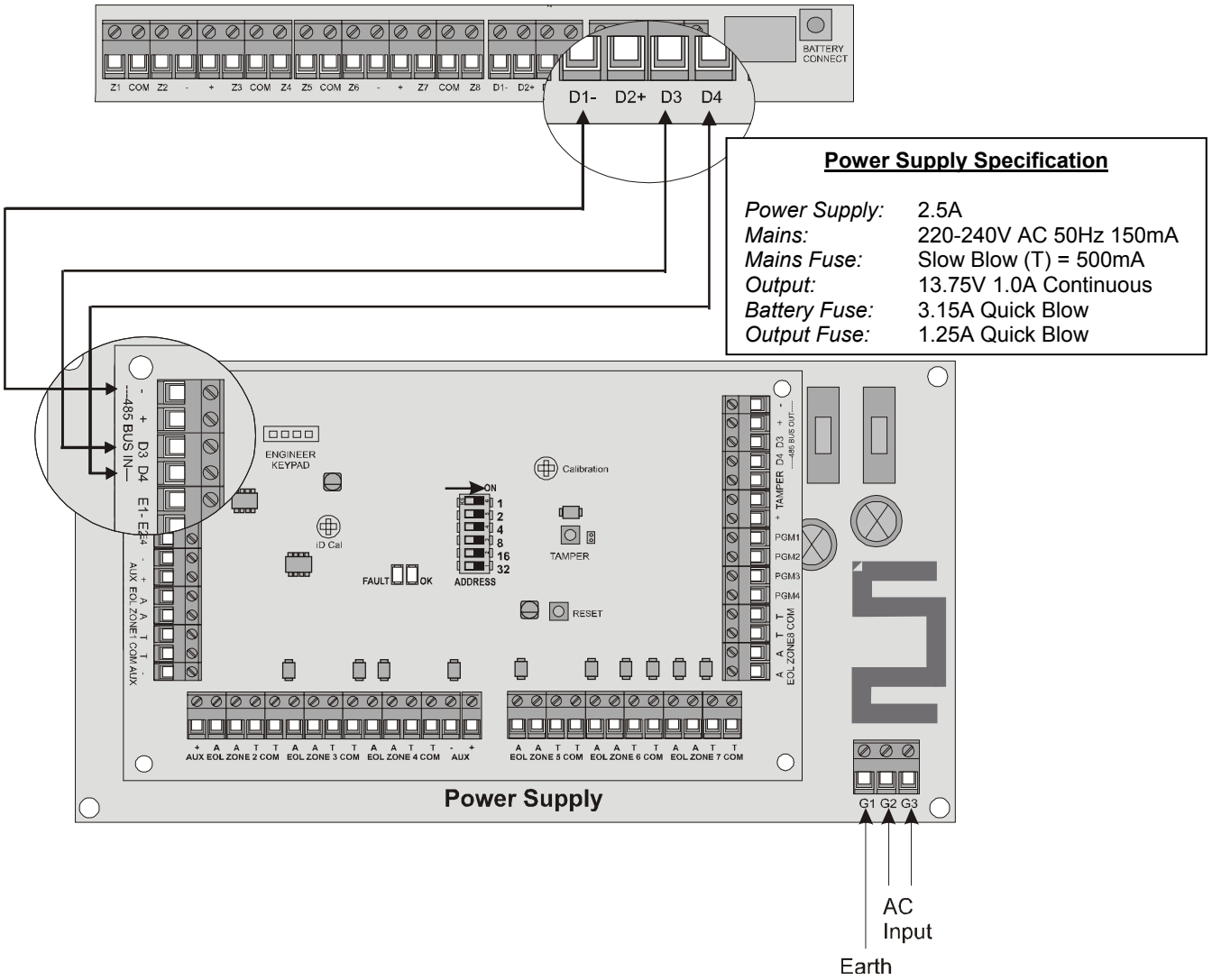
Address	Switch					
	1	2	4	8	16	32
00	OFF	OFF	OFF	OFF	OFF	OFF
01	ON	OFF	OFF	OFF	OFF	OFF
02	OFF	ON	OFF	OFF	OFF	OFF
03	ON	ON	OFF	OFF	OFF	OFF
04	OFF	OFF	ON	OFF	OFF	OFF
05	ON	OFF	ON	OFF	OFF	OFF
06	OFF	ON	ON	OFF	OFF	OFF
07	ON	ON	ON	OFF	OFF	OFF
08	OFF	OFF	OFF	ON	OFF	OFF
09	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF

Address	Switch					
	1	2	4	8	16	32
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF

14.10.3 Remote Input Expander (ZEM 830+)

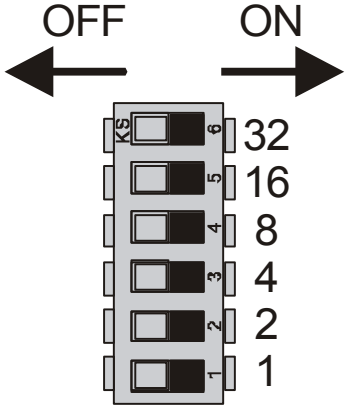
Please note when connecting the ZEM 830+ with a power supply, the terminal "D2" should not be connected to the control panel.

14.10.4 Connecting the ZEM 830+ with power supply



14.10.5 Addressing the ZEM 830+

ZEMs are addressed using the DIP switches on the PCB. The DIP switches operate as follows:

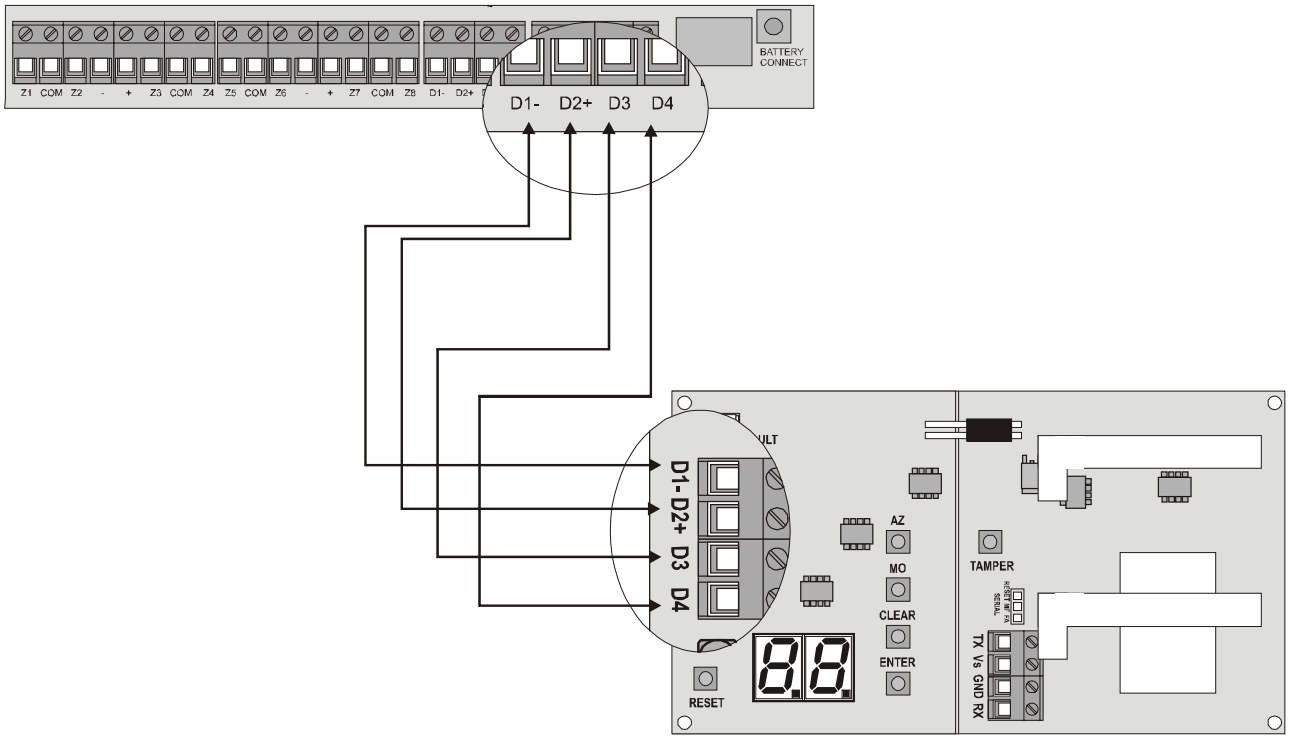


Switches should be On or Off as shown in the following table:

Address	Switch					
	1	2	4	8	16	32
00	OFF	OFF	OFF	OFF	OFF	OFF
01	ON	OFF	OFF	OFF	OFF	OFF
02	OFF	ON	OFF	OFF	OFF	OFF
03	ON	ON	OFF	OFF	OFF	OFF
04	OFF	OFF	ON	OFF	OFF	OFF
05	ON	OFF	ON	OFF	OFF	OFF
06	OFF	ON	ON	OFF	OFF	OFF
07	ON	ON	ON	OFF	OFF	OFF
08	OFF	OFF	OFF	ON	OFF	OFF
09	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF

Address	Switch					
	1	2	4	8	16	32
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF

14.10.6 Connecting the Radio ZEM



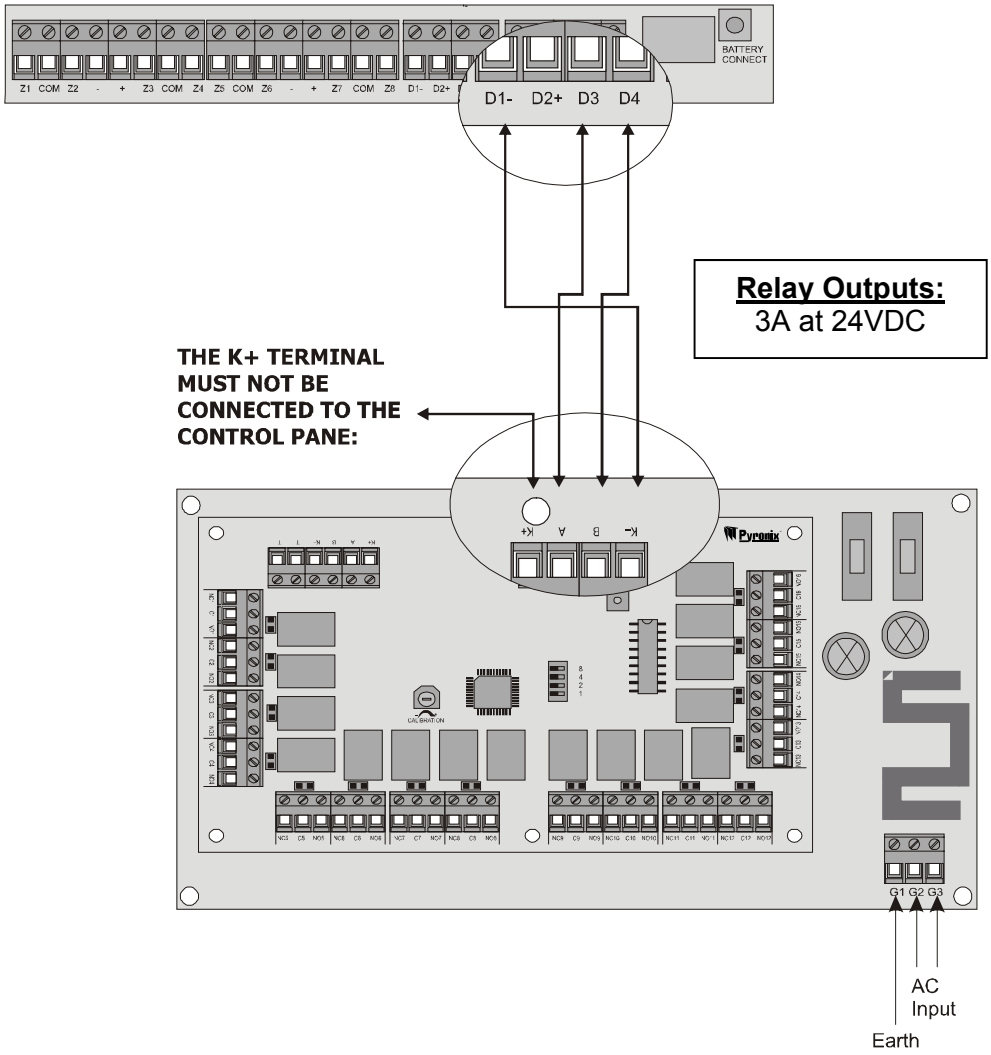
14.10.7 Addressing the Radio ZEM

For details of addressing the Radio ZEM please see page: 96.

14.11 The Output Module

14.11.1 Connecting an Output Module with a power supply

The Output Module can come with a power supply of 1.5A. Please note that when connecting the output module PSU, the terminal "K+" or "D2" should not be connected to the control panel.

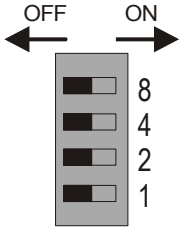


Please note the transistor output module connects via the terminals D1, D2, D3, and D4.

14.11.2 Addressing the Output Modules

Output Modules are addressed using the DIP switches on the PCB. The DIP switches operate as follows:

Switches should be On or Off as shown in the following table.

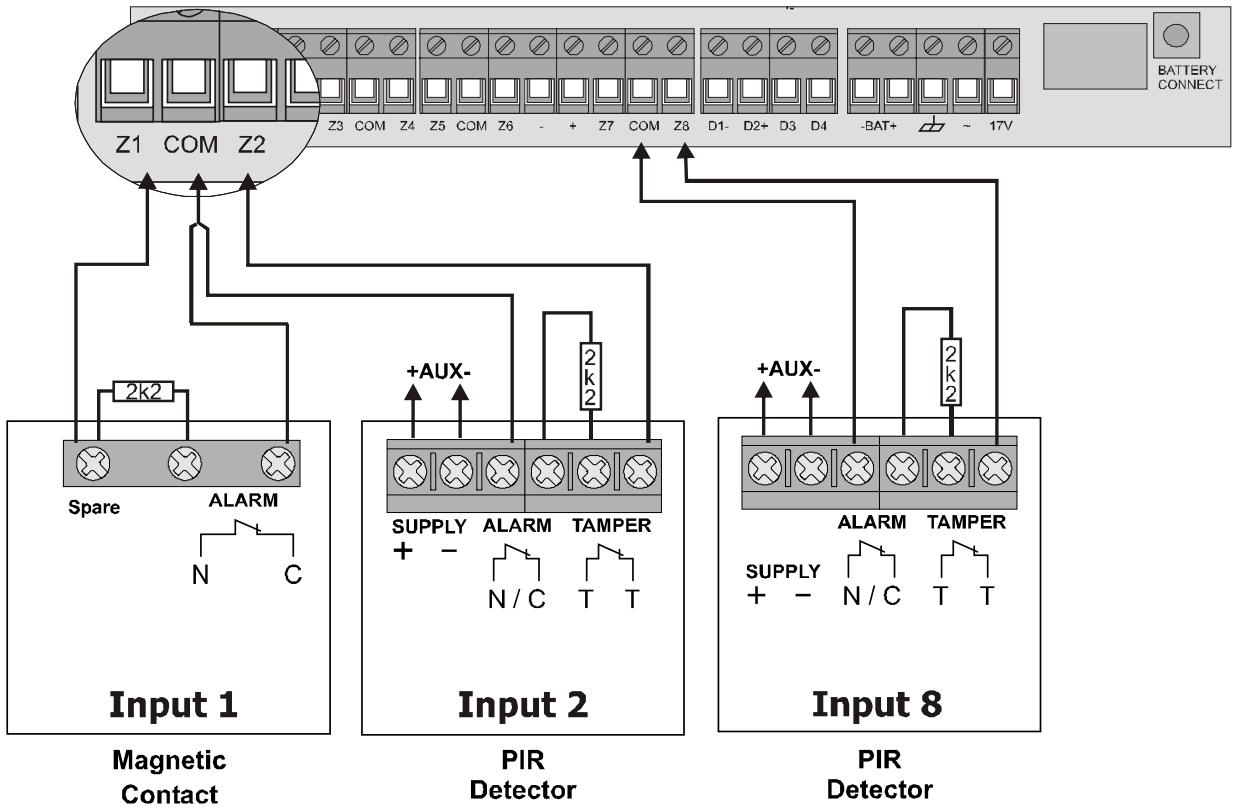


Address	Switches			
	1	2	4	8
00	OFF	OFF	OFF	OFF
01	ON	OFF	OFF	OFF
02	OFF	ON	OFF	OFF
03	ON	ON	OFF	OFF
04	OFF	OFF	ON	OFF
05	ON	OFF	ON	OFF
06	OFF	ON	ON	OFF
07	ON	ON	ON	OFF

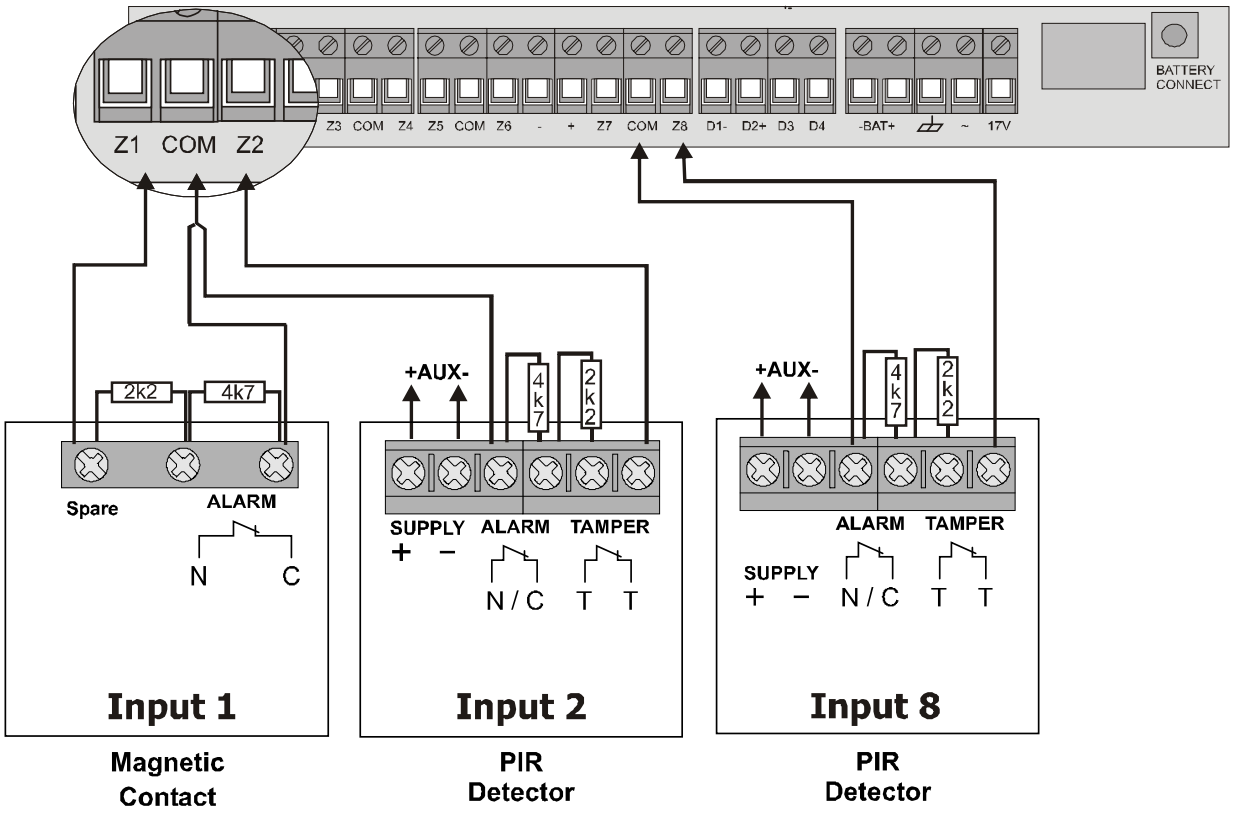
14.12 Input Configuration

14.12.1 Single End of Line (SEOL) Wiring

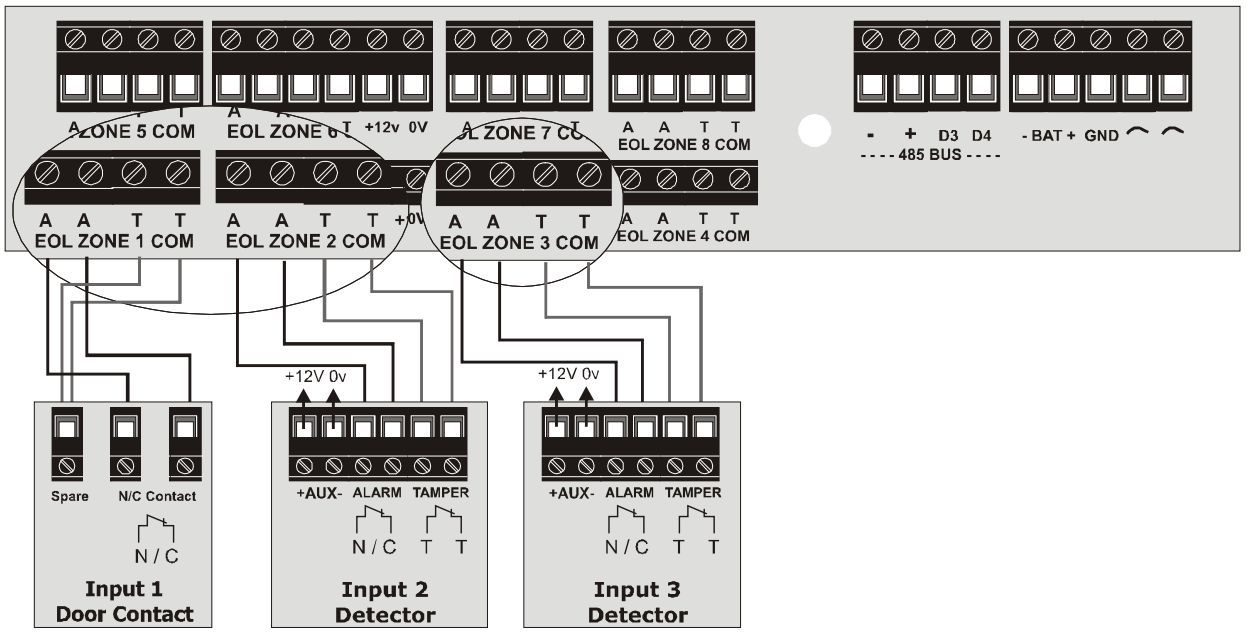
NOTE: This wiring configuration does not comply with Grade 3



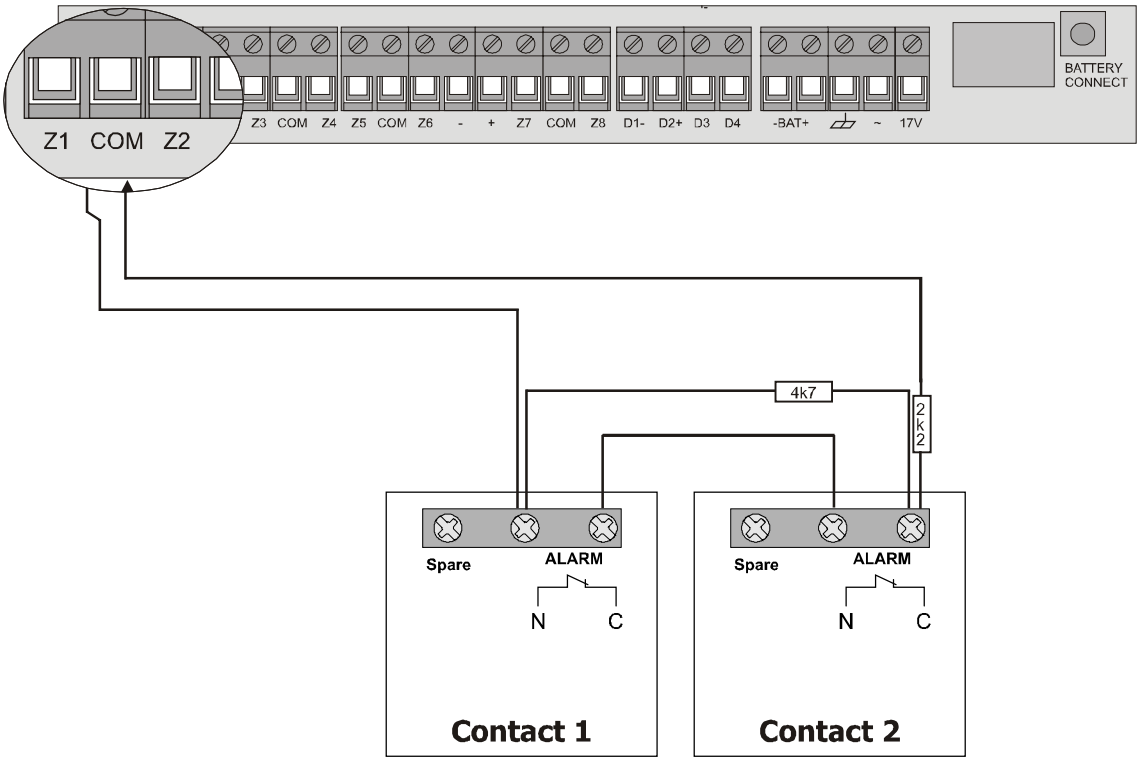
14.12.2 Double End of Line (DEOL) Wiring



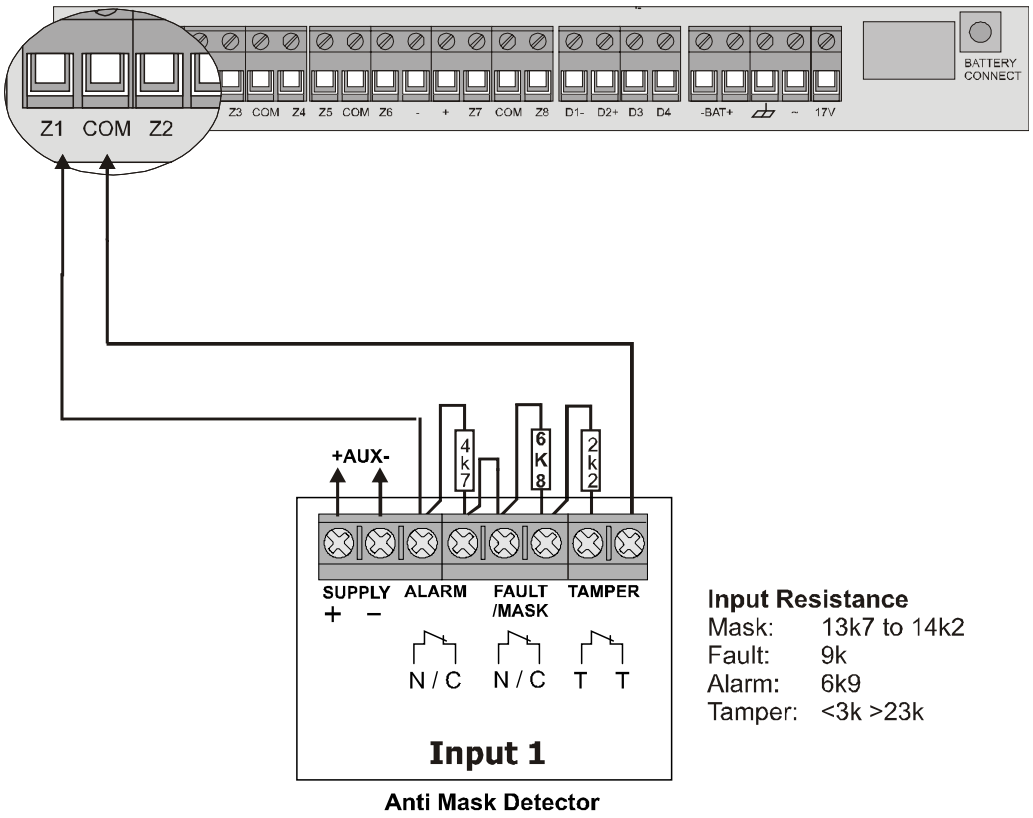
14.12.3 Double pole wiring (EURO 46 only)



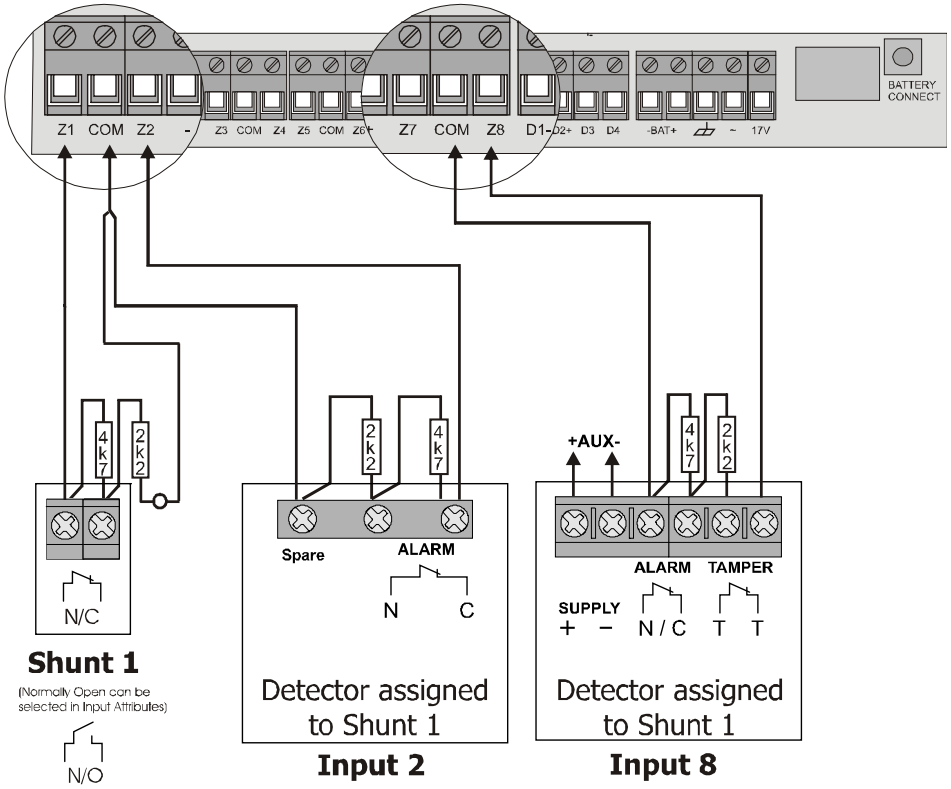
14.12.4 Connecting a series of door contacts to one input



14.12.5 Grade 3 Configuration Using An Anti Mask Detector To A Single Input



14.12.6 Configuration of Shunt Inputs



In this example, Inputs 2 and 8 have been programmed as 24 hour inputs, and are assigned to Shunt 1. When input 1 (programmed as 'Shunt Input') is opened, after 10 seconds, Inputs 2 and 8 become active. If either of these detectors is already installed in an 'alarm condition' the delay will be extended indefinitely. The use of a shunt fault output to drive a buzzer is recommended. If Input 1 hasn't been activated, Inputs 2 and 8 are disabled.

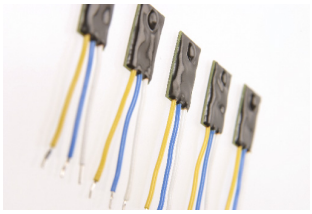
CHAPTER 15: ID PLUS WIRING

The EURO control panels incorporate the feature of iD plus wiring.

This gives you a means of simplifying wiring by individually addressing a number of detectors wired to the control panel in parallel. For iD input addressing please see page: 10.

The use of SCREENED cable is specified to minimise any problems from RFI, especially taking into account the lack of control over any wiring installed after the alarm system is commissioned.

A small interface, known as a 'biscuit' – actually a silicon microchip - is used to achieve this, and wires directly into the terminals of any detector.



Each device has its own identification number, from 01 to 30, which must **NOT** be duplicated on the same network.

A new network (i.e. each new ZEM) has a new sequence of biscuits starting from 01.

The system polls the devices continuously for two signals:

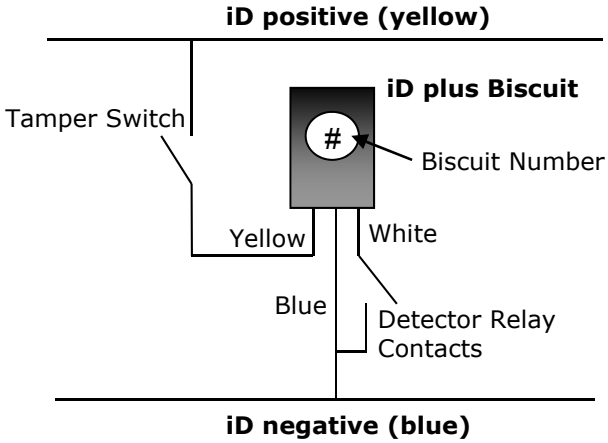
a) A diagnostic signal showing that the device is correctly connected and functional – and that the tamper switch is correctly closed.
b) A signal to report the status of the detector being monitored.

15.1 iD connections

The devices wire in any order and any parallel configuration, requiring two cores only for communication plus the supply for detectors.

It is essential that the connections are correctly made, or serious malfunction of the entire iD network could result.

The standard wiring convention is YELLOW for the iD Line +, and BLUE for the iD Line –, which thus match the colour coding of the biscuit itself.

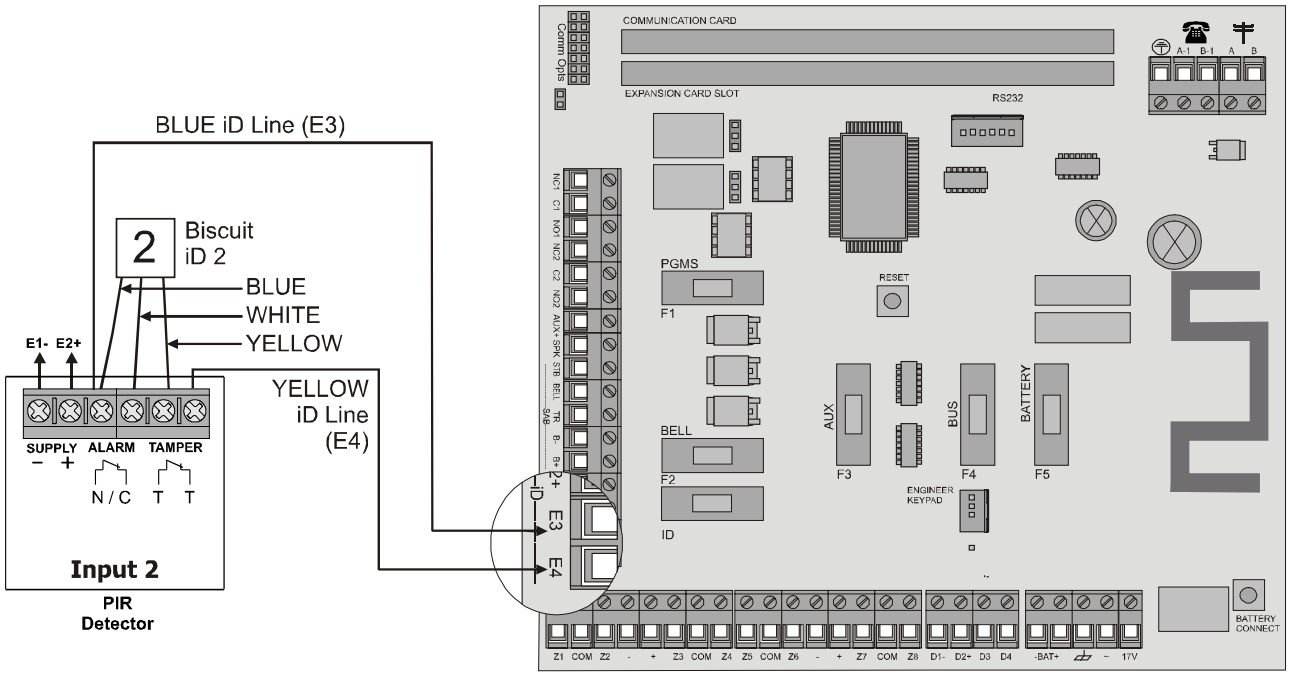


The third, WHITE, connection to the biscuit is used for the switch contact.

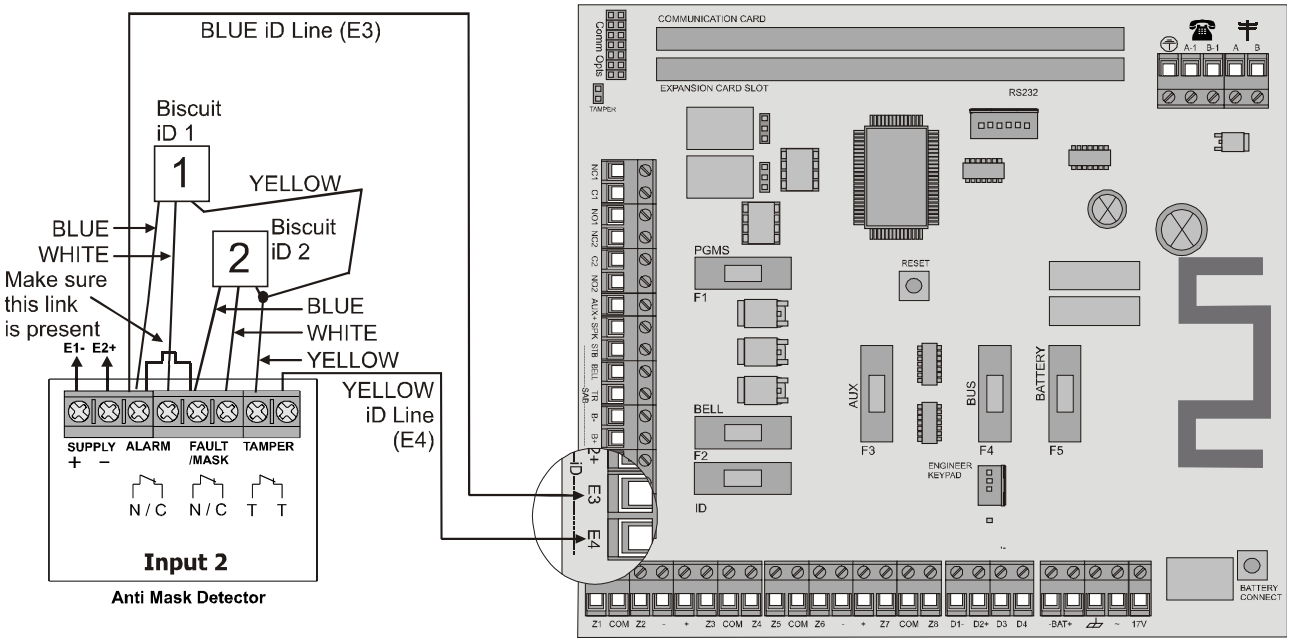
YELLOW: iD+ Terminal E4
BLUE: iD - Terminal E3

Tamper switch: In series with YELLOW
Switch contact: Between WHITE and BLUE

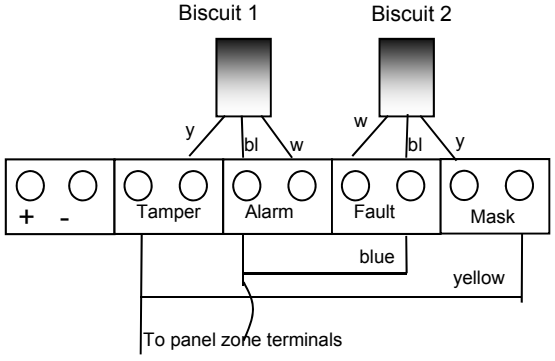
15.1.1 Connecting iD biscuits to PIRs (Grade 2)



15.1.2 Connecting iD biscuits to PIRs (Grade 3)



For separate fault and mask relays use the below configuration:



Please note that when using masking you must program the masking biscuit (iD 2 in the above example as 'fault) and then pair the corresponding inputs using the 'paired input' attribute.

It is possible to spur off at this point to a further detector(s).

On completion of making connections, the biscuit should be placed neatly against the terminal block or cable form, ensuring that it does not obstruct the tamper switch, cause a short circuit, or obstruct the operation of the detector.

15.1.3 iD Termination

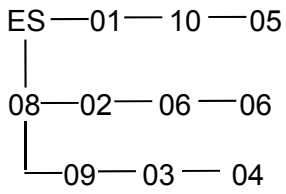
Each cable run should be terminated with a 0.01µF capacitor connected between iD + and - (yellow and blue) at the last biscuit.

NORMALLY OPEN DETECTORS should be connected in the same way. Select the 'Normally Open' attribute when programming the input.

WINDOW FOIL and similar detectors require the iD 'DP' junction box, which interfaces an optically isolated circuit to the iD biscuit.

USE OF "iD PLUS" and original "iD" biscuits connected to the same system device is NOT recommended.

HINT: It will be found beneficial for subsequent maintenance and faultfinding purposes, to have a simple record of the cable layout and biscuit order available, eg:



iD DP JUNCTION BOX:
Provides double pole circuit to interface to window foil, or other detectors that cannot be located close to the biscuit, for multiple contacts connected to the same biscuit, etc.

NOTE: The original 'DP' Junction box was designed for 24 Hour tamper, and similar circuits only, and does NOT separately identify a tamper circuit. This can be distinguished by having a socket for a 'plug-in' biscuit – the new type, with correctly identified tamper circuit, has terminals for a 'wired' biscuit.

Reminders for successful installation of an iD system:

Ensure that all biscuits are correctly connected

Avoid mixing iD and iD plus biscuits.

Ensure that safe wiring distances are not exceeded and cable runs are correctly terminated.

Ensure that all biscuits are wired directly to the detector

Do not extend the 'White' connection

Ensure that cabling specifications are carefully followed.

Ensure that the resistance measurements are correctly checked and recorded

Castle Care-Tech Ltd cannot be held responsible for problems arising from failure to follow these specifications.

NOTE: When ZEM is used in iD mode, it is essential that it be plugged onto an Intelligent Power Supply, unless used within 10 metres of the End Station (or other power supply).

15.1.4 iD Commissioning Readings

On completion of the installation, it is essential that the commissioning readings described below be taken, both to ensure the integrity of the system and to satisfy the documentation requirements of PD6662, etc.

This procedure has been agreed with NSI as an acceptable method of meeting these requirements:

1. Complete the wiring, but do not secure the detector housings.
2. Remove the iD + and – connections from the terminals E3 & E4 at the End Station, and twist them together.
3. Measure, and record, the following readings, at each detector:
   a: The resistance between the iD Blue and Yellow connections – and ensure that this is correct for the cable length involved (typically 100 metres of alarm cable will measure approx. 16 ohms).
   b: The supply voltage at the detector (if applicable).
4. Secure the detector housing, ensuring that the tamper switch is correctly closed.
5. Repeat the above for each detector.
6. Separate the iD + & – wires at the End Station, and measure and record the resistance between them. Compare the reading with the table below to ensure that the correct number of biscuits is being read. Investigate any significant variation.
7. Check the resistance reading between the iD + & – wires and mains earth. This should show open circuit; any reading could indicate an earth leakage, which may cause problems later.
8. Check the voltage reading between the iD + & – wires and the 0v and +12v terminals (E1,2). This should show open circuit; any voltage present will indicate a leakage, which may cause problems later.
9. Replace the iD wiring in the End Station terminals.
10. Test iD line response in diagnostic menu, and Walk test detectors.

Note: The measurements on this page are made with the wiring still in place at all detectors, and with power applied. The presence of the iD biscuits will not affect the readings.

Table of resistance readings for measurement at step 6, above:

No of biscuits	Nominal resistance	No of biscuits	Nominal resistance	No of biscuits	Nominal resistance
1	1250K	11	114K	21	59.5K
2	625K	12	104K	22	56.8K
3	417K	13	96K	23	54.3K
4	313K	14	89K	24	52.1K
5	250K	15	83K	25	50.0K
6	208K	16	78K	26	48.1K
7	179K	17	73.5K	27	46.3K
8	156K	18	69.4K	28	44.6K
9	139K	19	65.8K	29	43.1K
10	125K	20	62.5K	30	41.7K

NOTE: These readings are a guide to the effectiveness of the wiring, and that all biscuits are correctly connected. This is NOT a diagnostic test for the biscuits themselves. A range of tolerance, roughly equivalent to the next figure above and below, should be expected

15.1.5 Important Notes for Installing iD systems

A transient generated by an iD biscuit whilst being addressed will occasionally cause another biscuit to perform a counter reset. This can result in the biscuit affected signalling again, at an incorrect address, and thus generate a 'twin device' alarm.

To eliminate this possibility a small value capacitor (0·01 µF recommended) should be wired across the iD line at a convenient biscuit or junction box, at the end of each iD spur.

A supply of suitable capacitors (marking code "103") is supplied with the *EURO* End station / ZEM.

Do not extend the Biscuit White wire.

Remember that some sites may not be suitable for the use of iD systems, whether because of the re-use of wiring of dubious history, or the presence of severe sources of electrical interference.

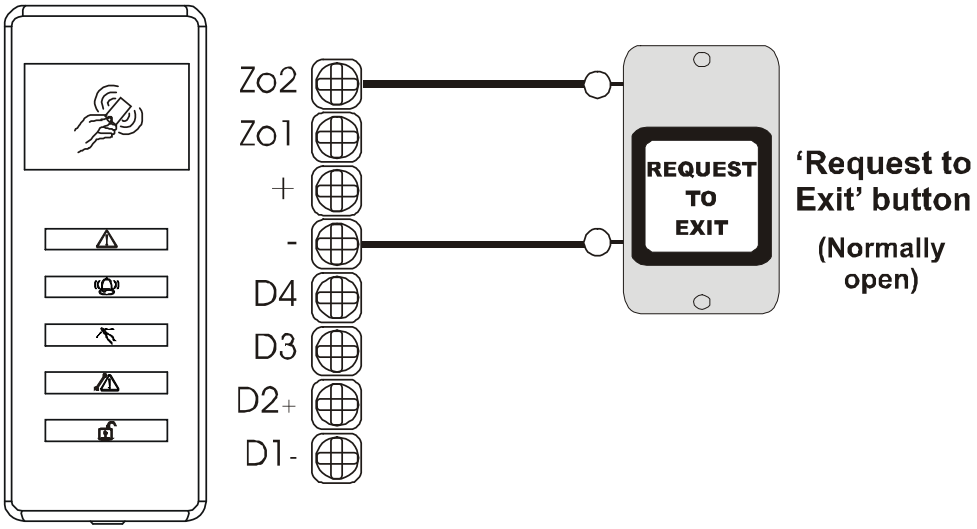
Training is recommended for all personnel working on iD systems. Courses are available on application to the Sales Dept.

CHAPTER 16: ENTRY CONTROL

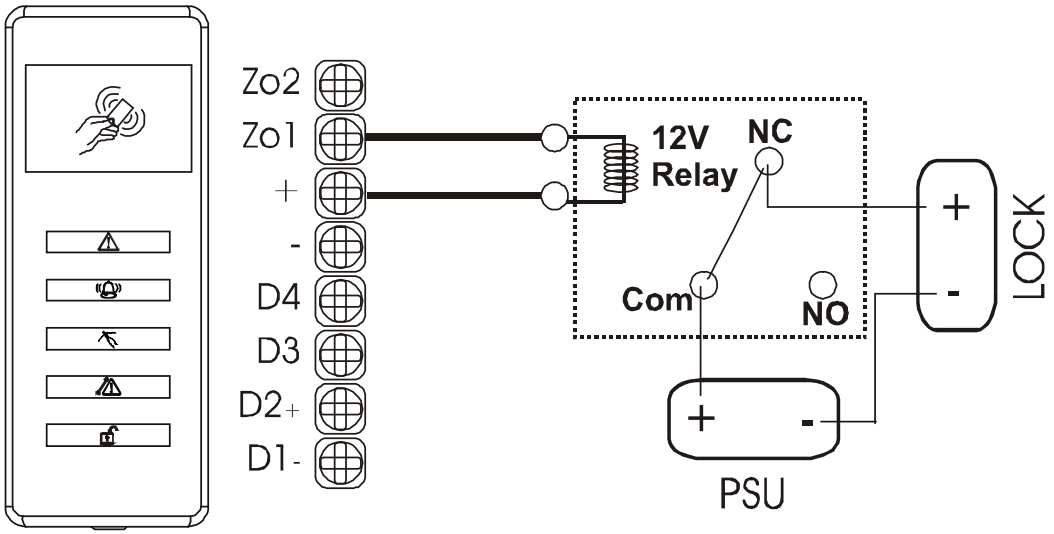
Control panels with software version 7 and above provide the facility to use the internal or external readers to lock and unlock doors.

16.1 Entry Control: Internal Tag Reader

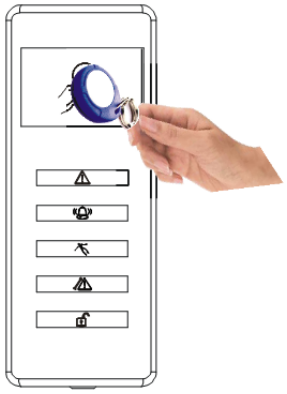
Connecting the Push to Exit Button



Connecting the Mag Lock Control



16.2 Arming the Control Panel using the internal prox reader

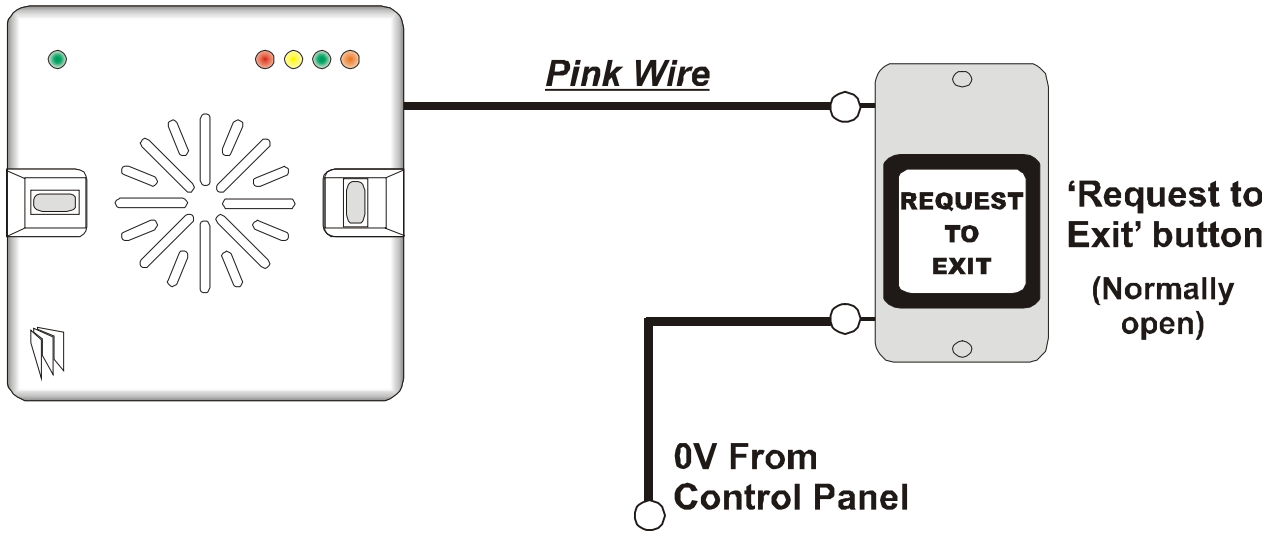
Action	Visual	Sequence
Present a valid tag to the reader and then remove it.		The door lock will open
Present the same tag to the reader within 10 seconds, and then remove it. The exit time will start on the control panel and the door will lock.		The system will set after the final door is closed/exit time expires.

16.3 Disarming the Control Panel using the internal prox reader

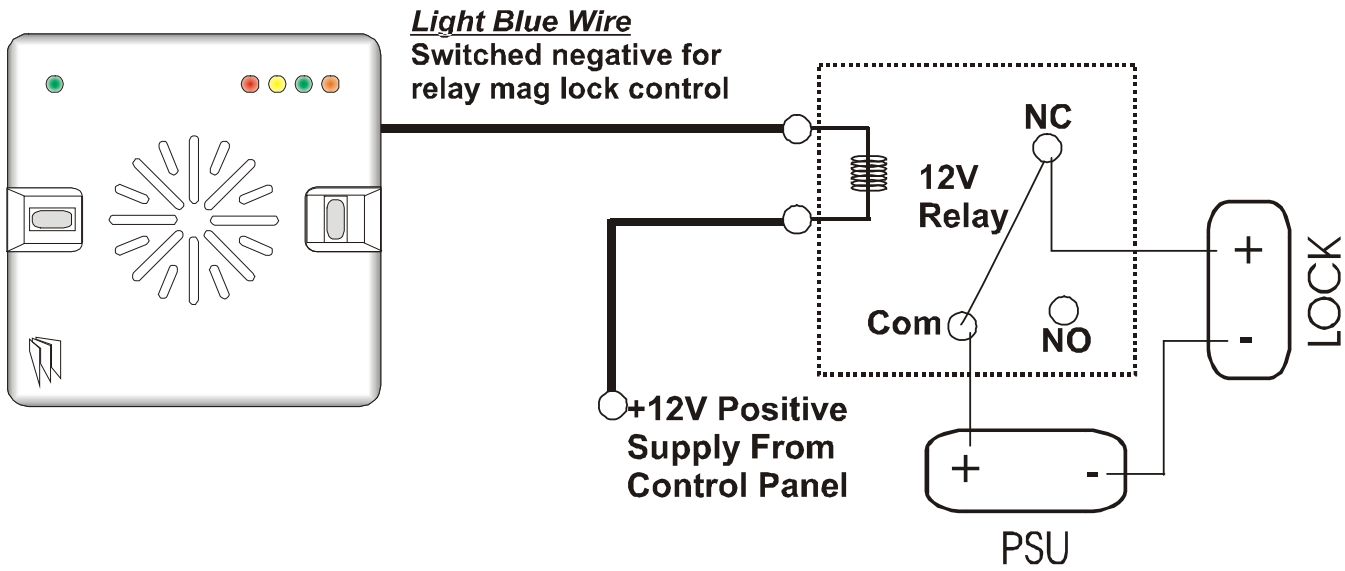
Action	Visual	Sequence
Present a valid tag to the reader and then remove it.		The bell symbol will be illuminated if the system is set, or the unset symbol will be illuminated if the system is unset.
Present the same tag to the reader, and then remove it.		The doors will unlock and the system will be unset.

16.4 Entry Control: External Tag Reader

Connecting the Push to Exit Button

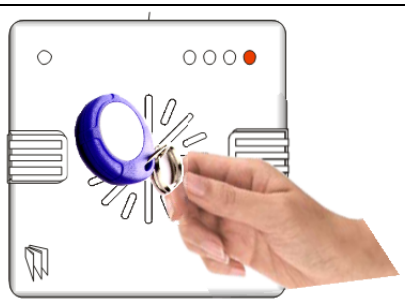


Connecting the Mag Lock Control

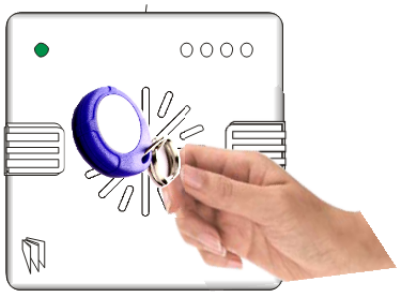


Wire colour	Description	Wire Colour	Description
Brown	Addressing	**Pink**	PTE
Orange	Addressing	**White**	Door
Green	Addressing	**Black**	D1
Light Blue	Lock	**Blue**	D4
Grey	Ground	**Yellow**	D3
Violet	Alarm	**Red**	D2

16.5 Arming the Control Panel using the external prox reader

Action	Visual	Sequence
Present a valid tag to the reader and then remove it.		The **GREEN** LED will come on and if programmed, the door will unlock.
Present the same tag to the reader, and then remove it. The exit time will start on the control panel.		The **RED** LED will illuminate when the system has armed, and after a few seconds, the LED will extinguish

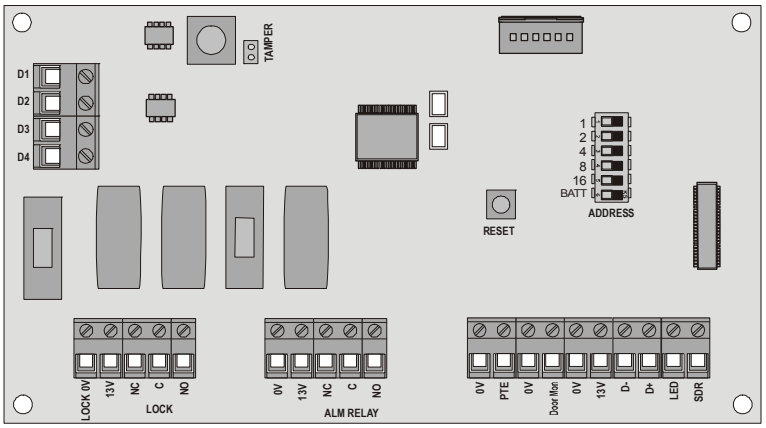
16.6 Disarming the Control Panel using the external prox reader

Action	Visual	Sequence
Present a valid tag to the reader and then remove it.		The **RED** LED will illuminate to show the system is armed.
Present the same tag to the reader, and then remove it.		The **RED** LED will extinguish, and the system will disarm. And if programmed, the door release will open.

CHAPTER 17: ACCESS CONTROL

The EURO system provides access control facilities integrated into the alarm system, incorporating the following features:

Number of Doors	1 per door station, max (dependant upon other control devices fitted):
Reader Head	Fully sealed to IP66 for exterior use.
Lock Release	Suitable for any type, including car park barriers. Voltage or volt-free outputs available, for 12V or 24V DC, or AC mechanisms.
Tags	Proximity tags shared with system operation.
Lock Open	Timer programmable individually 0 – 250 seconds.
Door Open	Timer programmable individually 0 – 250 seconds.
Door Monitor	Yes – may be integrated into alarm system.
Local Alarm	Yes – changeover relay contacts.
Request to Exit	Input for normally open push button.
Power Supply	Integrated with door station. Can power second station for two-way access.



RS-485		Outputs etc	
D1	RS485 0V Supply	0V	Lock 0V
D2	RS485 +12V Supply	13V	Lock +12V
D3	RS485 'A' Data	NC	Lock Normally Closed
D4	RS485 'B' Data	C	Lock Common
Reader Connections		NO	Lock Normally Open
0V	Black (0V)	0V	Supply 0V
13V	Red (+12V)	13V	Supply +12V
D-	Brown	NC	Alarm Normally Closed
D+	Blue	C	Alarm Common
LED	Green	NO	Alarm Normally Open
SDR	White	0V	RTE (Exit Button)
Fuse Values		RTE	RTE (Exit Button)
F1	3.15A	0V	Door Mon.
F2	3.15A	Door Mon	Door Mon.

NOTE 1: Before powering up, the Door Station must be addressed using the coding switches – open switches to add up to the address required.

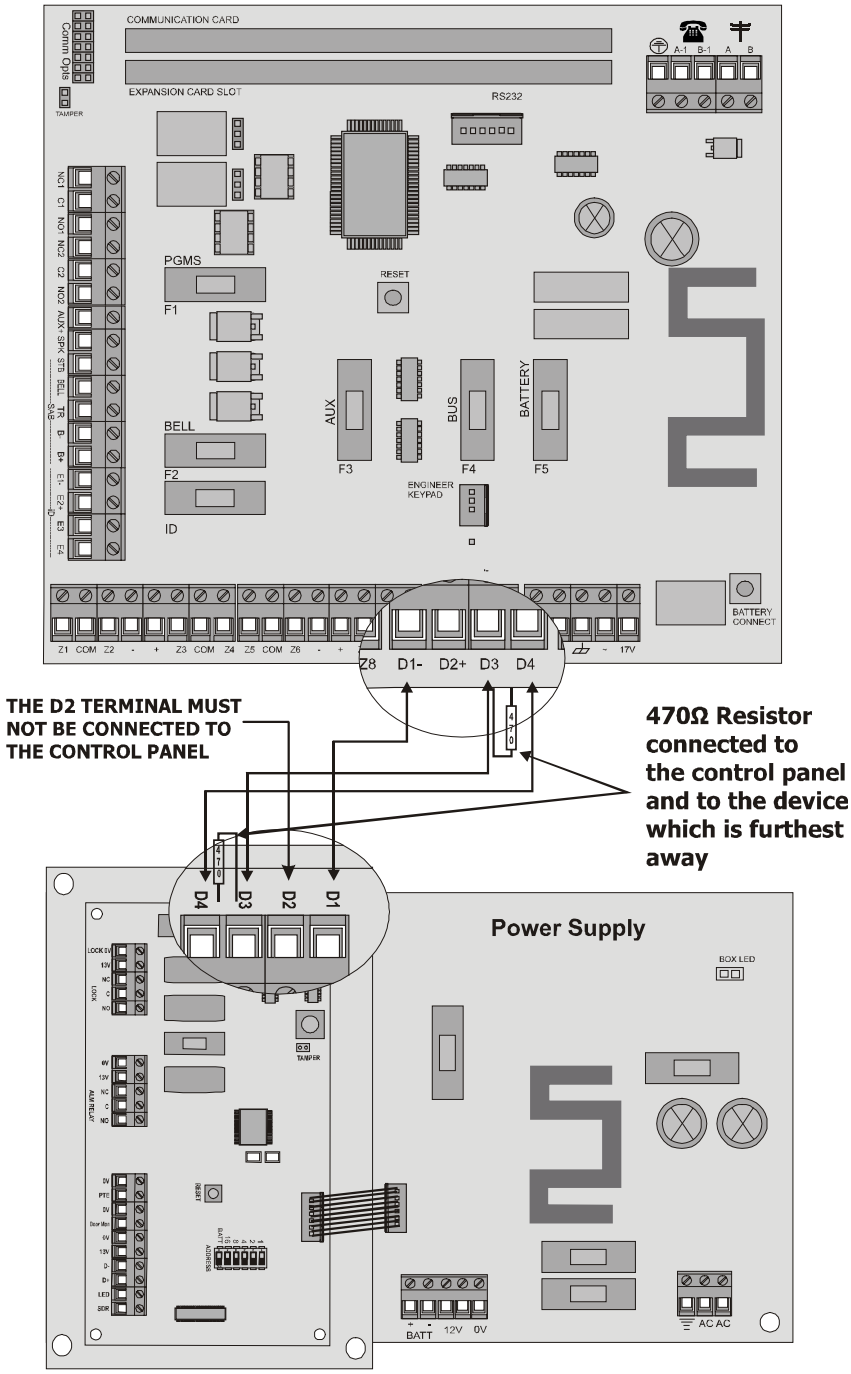
NOTE 2: Issue 2 PCB is shown. Issue 1 Door Station PCBs do not have the full range of options, nor provide full diagnostic features.

All connections to the intelligent power supply are automatically made to power the unit and lock mechanism from the local power supply, and use the system diagnostic capabilities to control the power supply.

NOTE: In default mode, the Door Station communications section is powered from the local power supply, through the plug-on connections. Do NOT, therefore, connect terminal D2 to the RS-485 network.

Before powering up, the Door Station must be address using the coding switches as described further on in this manual.

17.1.1 Connecting the ACCESS System



17.1.2 Addressing the ACCESS system

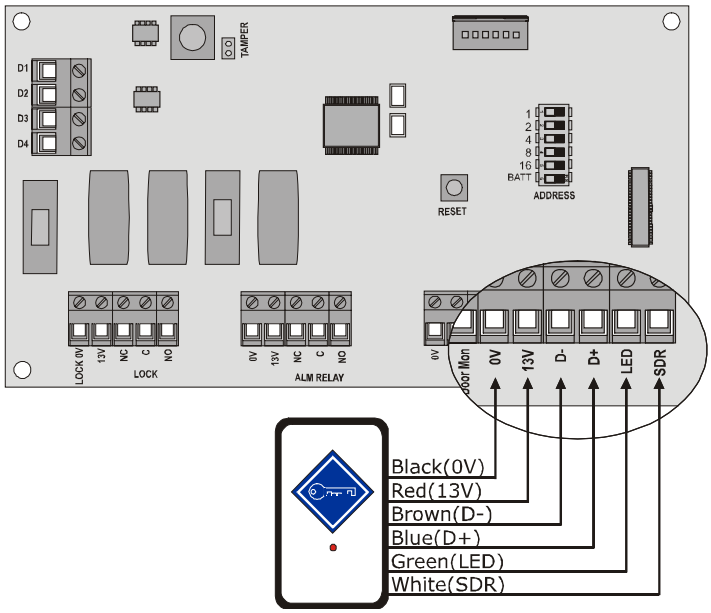
The door is addressed by means of the coding switches on the Door Station, before the system is powered up, as follows:

Switch	1	2	4	8	16
Address					
00	C	C	C	C	C
01	O	C	C	C	C
02	C	O	C	C	C
03	O	O	C	C	C
04	C	C	O	C	C
05	O	C	O	C	C
06	C	O	O	C	C
07	O	O	O	C	C
08	C	C	C	O	C
09	O	C	C	O	C
10	C	O	C	O	C
11	O	O	C	O	C
12	C	C	O	O	C
13	O	C	O	O	C
14	C	O	O	O	C
15	O	O	O	O	C
16	C	C	C	C	O
17	O	O	C	C	O
18	C	O	C	C	O
19	O	O	C	C	O
20	C	C	O	C	O
21	O	C	O	C	O
22	C	O	O	C	O
23	O	O	O	C	O
24	C	C	C	O	O
25	O	C	C	O	O
26	C	O	C	O	O
27	O	O	C	O	O
28	C	C	O	O	O

17.1.3 The Access Control Reader

NOTE: The Access Reader cable must be kept separate from the lock supply connections.

The captive cable from the Access Reader head may be extended to a maximum of 100 metres. It is recommended that you use *twisted pair* cable. If a screen is present, this should be terminated a mains earth at the Door Station only.



Care should be taken to ensure that there is no earth leakage on this cable.

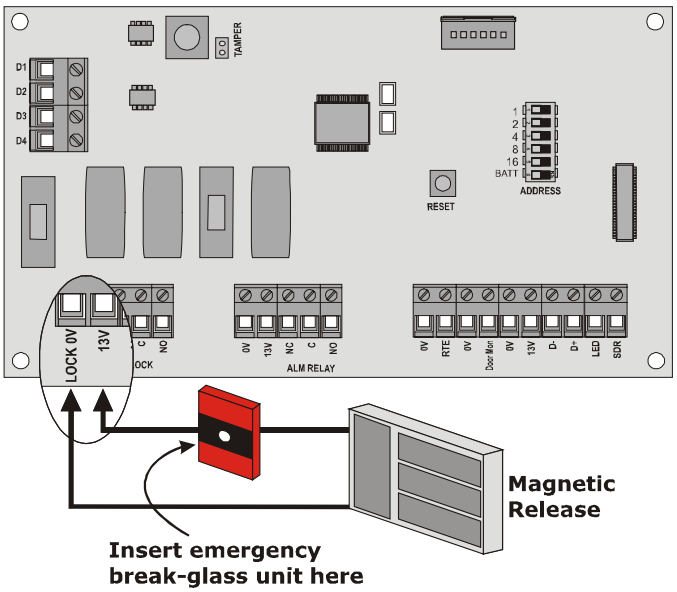
17.1.4 Lock Supply Connections

The wiring to the lock mechanism **must** be kept separate from that for the Access Reader head. Use of properly terminated screened cabled for **both** connections may provide sufficient isolation. Separation is preferred.

DC lock mechanisms **must** have the back-EMF protection diode correctly fitted as specified by the manufacturer.

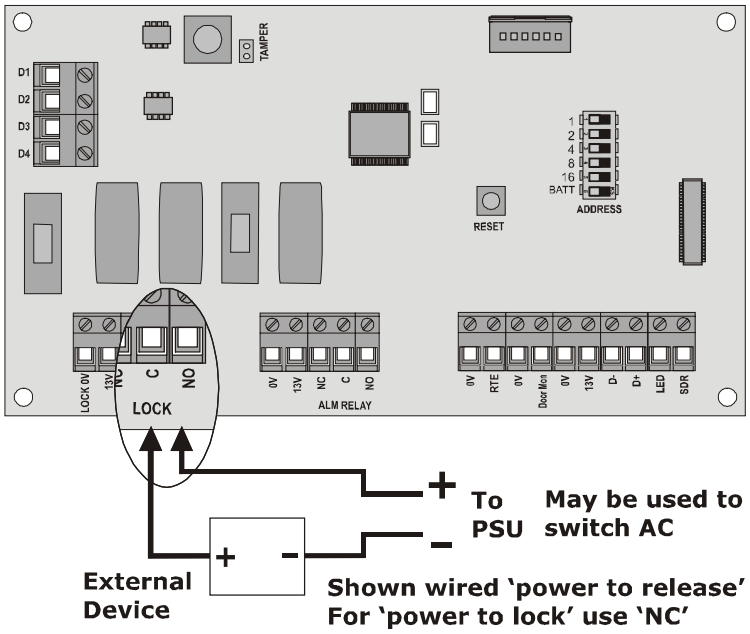
Using Switched 12V Supply

Max current: 2.5A for 15 seconds. Voltage is permanently present, and switched **off** to release the mechanism.



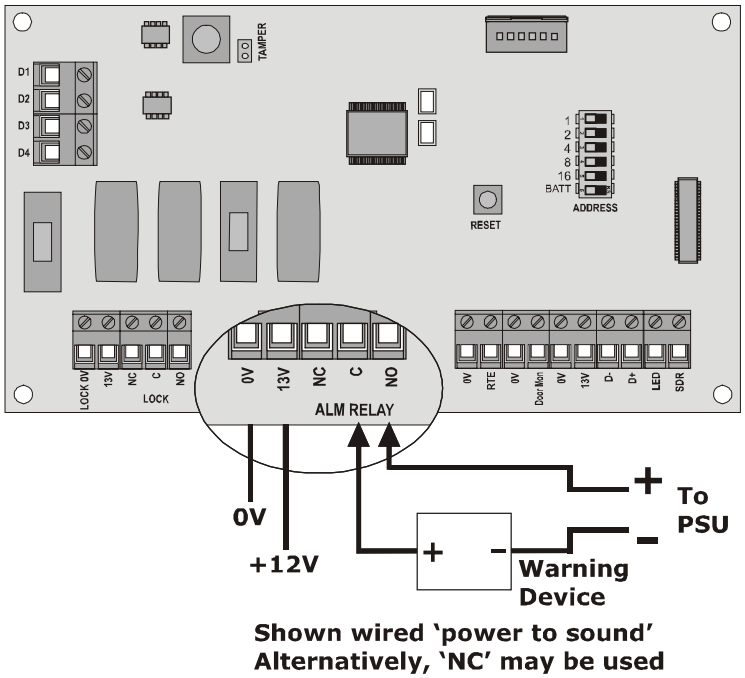
17.1.5 Using Volt Free Relay Contacts

Relay capable of switching up to 50 volts, and up to 10 amps. This may be used to switch the internal supply, or any suitable external supply, including AC voltages.



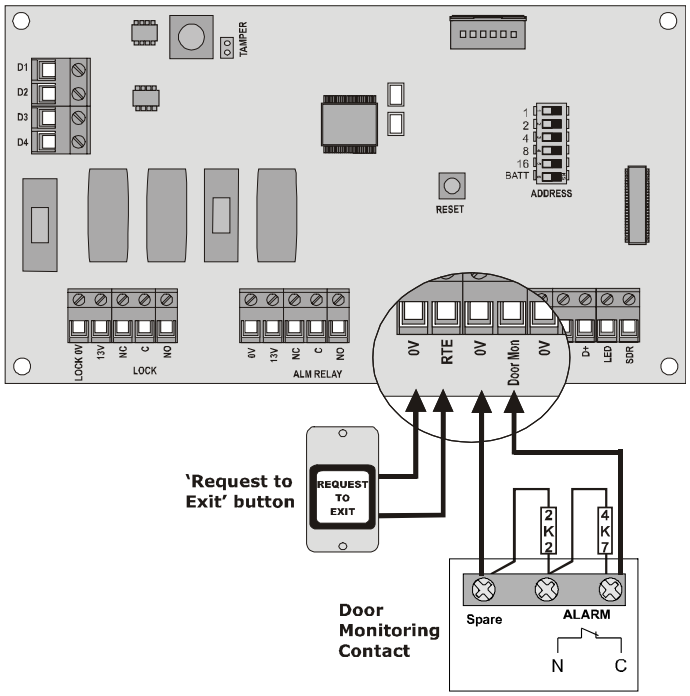
17.1.6 Alarm Output

Relay capable of switching up to 50 volts, and up to 10 amps. This may be used to switch the internal supply, or any suitable external supply, including AC voltages.



17.1.7 'Request to Exit' button and Door Monitoring Connections

If an electromagnetic lock or solenoid bolt is used, an RTE device (exit button) is required to permit exit. This is activated when a normally open push button is momentarily closed.



The door monitoring facility may use a switch contact on a monitored door release, but a separate security door contact is recommended.

NOTE: Each Door Station has these connections available.

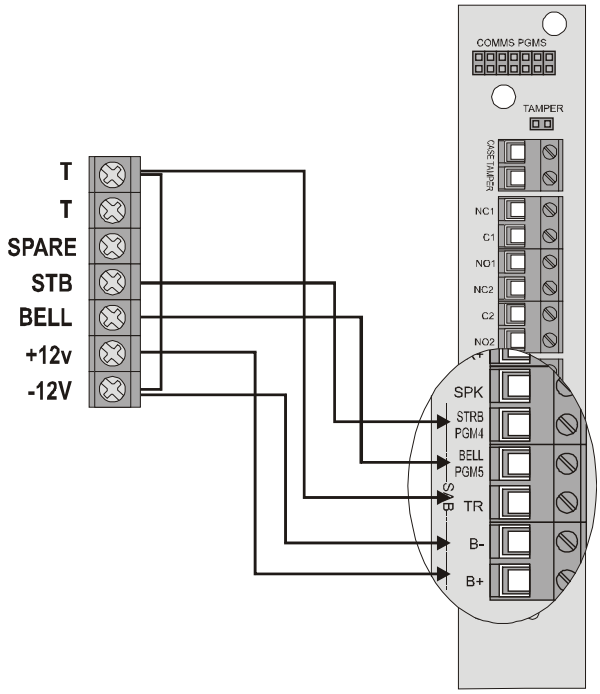
17.1.8 Automatic Release from an Alarm Output

A Fire Alarm 'Auxiliary' relay output may be wired in place of the exit button shown in the diagram above. Alternatively, any appropriate output on the control panel may be used to drive 0V directly into terminal RTE to achieve the same functionality.

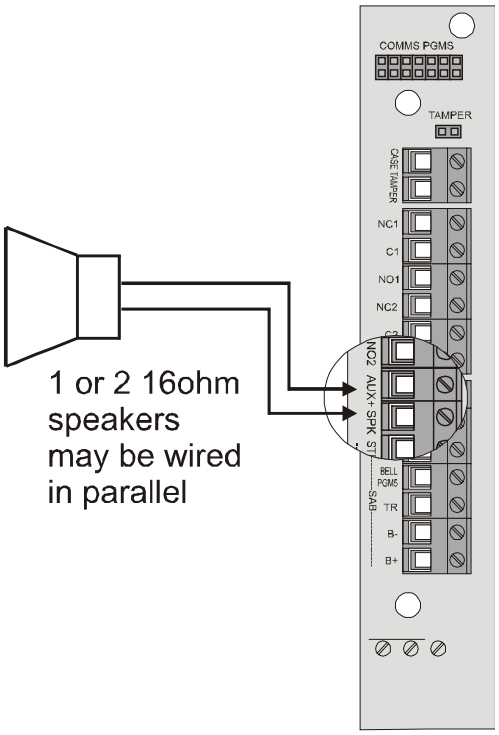
CHAPTER 18: PROGRAMMABLE OUTPUTS WIRING

18.1.1 Siren Connection

NOTE: Output 3 is defaulted as "Strobe Any" and Output 4 is defaulted as "Siren Any",



18.1.2 Internal Speaker Connection



APPENDIX A: FAULTS

Device Fail

If a device on the EURO system is not installed correctly or has lost its communication with the panel, "DEVICE FAIL" will be shown on the keypad as shown:

Control Panel	**=**	**CP = Main panel fault (e.g. battery)**
485 Fail Kpd	**=**	**Keypad**
485 Fail Trd	**=**	**Tag Reader / Door Station / TMZ**
485 Fail Zem	**=**	**Zone Expander Module (ZEM)**
485 Fail Opm	**=**	**Output Module**
485 Fail Wzm	**=**	**Wireless ZEM**

For the keypad and tag readers, the top line will show the set point name, for the ZEMs and output modules a 'Location' description (if inputted) will be shown on the top line of the display instead of the address number. (Address number will be displayed in 2 digits, e.g.: 00,01,02 etc).

Fault Indications

RS-485 BUS PROBLEMS		
Fault	**Description**	**Solution**
485 Fail xxx	Device on RS-485 communications bus is failing to communicate correctly with the control panel.	Identify device from the location/name and the device type. Check device addressed correctly to match programming. Ensure that 2 devices of the same type do not share the same address. Check connections at device, and cabling to it. If above correct, re-boot device, followed by re-boot of End Station.
485/Comms Lost	Displayed on keypad that has not yet established communications with End Station	Part of routine initialisation procedure. If persists, check display at other keypad(s) to confirm if device failure at that keypad or complete system RS-485 failure (temporarily attach additional keypad direct to End Station if necessary).
Relay Fail S100/R100	ATE relay failed.	Go into Site Options->ATE Inputs and select the correct option (STU, digi or none)
Keypad display is BLANK	Keypad address does not match any keypad enabled	Check keypad address, noting that a keypad at address 00 must be present to program system. Also check "Assigning Keypads" menu in Engineer mode set up correctly.
Keypad display normal, but KEYS LOCKED OUT	More than one device connected at the same address	Correct addressing so that no overlaps. Then power system down and up again to correctly reinitialise.
Authorisation Required	The master manager will need to give you access	The option 'Allow Engineer Menu' will need to be enabled by the master manager

POWER SUPPLY PROBLEMS		
Fault	**Description**	**Solution**
Battery Fault xxx	Battery Fuse failed, OR Battery not present, OR Battery volts low	***Note:* This indication should be expected during recharge after a mains failure.** The top line displays 'Control Panel' if it is a fault on the endstation, if the Battery fault is on a ZEM/OPM 'xxx' will show the device type and the top line the location text if entered, if not it shows xxx-nn where nn is the address of the ZEM/OPM.
Bat Test Fail XXX	Battery Load Test has failed	Only displays if option selected. Battery uncharged or capacity below specification may need replacing. Same method as showing the device as battery fault.
Bat Critical XXX	Battery being powered down	Protects battery from deep discharge damage during extended mains failure. Same method as showing the device as battery fault. ***Note:* System is now powered down**
Mains Fail xxx	Mains supply failed	System detects mains frequency out of specification, as well as voltage. Same method as showing the device as battery fault. **Note: 'AC FAIL' timer operative**
Fuse Fault x	Fuse identified failed, OR Output protected by fuse drawing excessive current	x identifies fuse affected: Fuse 1:PGMs. Fuse 2: BELL Fuse 3: Aux. Fuse 4: Bus Fuse 5: Battery. Fuse 7: iD
Low Volts xxx	Power supply volts low	Battery volts below normal 'battery fault' level during mains failure. Same method as showing the device as battery fault

DETECTION FAULTS		
Fault	**Description**	**Solution**
iD Line Short	Fault on iD line	Line may be shorted to itself, or to a supply connection. Check also for shorts to earth.
Twin Device	Fault on iD line	Possible duplicate biscuit installed.
Control Panel SAB Tamper	Tamper fault detected on connection from SAB	Terminal BT should be at or near 0v. If not, is SAB Tamper switch closed? Check Fuse F2 intact, and connections to SAB.
Case Tamper XXX	Case tamper switch open	Secure switch closed. Same method of showing the device as battery fault.

COMMUNICATION FAULTS		
Fault	**Description**	**Solution**
Control Panel Modem Fault	End Station unable to communicate with Digi Modem	If modem not present, ensure that "Disable Digi" option is set to 'YES' and "DOWNLOAD MODE" is set to 'NONE' or 'RS232'. If present, but not detected, check Digi Modem is inserted correctly (remove and reinsert, ensuring it 'clicks' into place) and complete initialisation by pressing End Station 'RESET' button for 2 seconds.
Control Panel ARC Call Fail	***Call to ARC from Digi Modem Digi Modem has failed. Note:*** *This is a communication problem, which is rarely caused by an equipment fault.*	Check ALL call details are programmed correctly. Ensure signalling format is correctly set for ARC receiver. Ensure that calls to the ARC or SMS bureaux numbers are allowed on the PSTN line, eg 0800, 0845 etc.
CHC TEST FAIL	Unable to communicate with Castle Host Computer. ***Note:*** This would also result if the telephone line had premium rate calls blocked.	Ensure the Digi is enabled, and at least one SMS call is correctly programmed. Check that ordinary phone on same line connects to CHC, and modem tones heard – if not, problem is PSTN – NOT equipment. De-program SMS content types for each call, exit Engineer menu, press RESTART button, and retry CHC test from Manager Menu.
Control Panel Line Fault 100	PSTN Line Fault signalled by Digi Modem.	Only operative if "DOWNLOAD BY MODEM" selected OR "DISABLE DIGI/SMS" is set to 'NO' ***Note: 'Line Fault' timer operative.***
ATE Line Fault	PSTN Line Fault signalled by device using STU/ATE pins on End Station.	Only operative if Site Option "DIGIREPLY" is set to 'STU' or 'Digicom.' ***Note: 'Line Fault' timer operative***
ATE Fail Comm	Call to ARC from device using End Station STU/ATE pins has failed. ***Note: This is a communication problem, which is rarely caused by an equipment fault.***	Only operative if Site Option "DIGIREPLY" is set to 'Digicom.'
ATSF Path Fail 100	One of the paths of the GSM/redcare has failed.	Check with the alarm receiving centre which path has failed. Send a test call via the GSM/redcare to check the communication again. This report will come up if 'STU' is selected on 'ATE inputs' in Site Options.
ATSF All Paths 100	All paths on the GSM/redcare have failed.	Send a test call via the GSM/redcare to check the communication again. This report will come up if 'STU' is selected on 'ATE inputs' in Site Options.

RADIO FAULTS		
Fault	**Description**	**Solution**
RADIO LOW BATT xx	Low battery on radio keyfob number 'xx'	Replace the battery on the mentioned keyfob
RADIO LOW BATT xx	Low battery on radio input number 'xx'	Replace the battery on the mentioned input device
RADIO LOW BATT xx	Low battery on radio bell number 'xx'	Replace the battery on the mentioned radio bell
RADIO SUPERVN xx	Radio input number 'xx' hasn't 'checked in'	Walk test the detector, perform a diagnostic – signal strength test and try replacing the battery
RADIO SUPERVN xx	Radio bell number 'xx' hasn't 'checked in'	Test the siren, , perform a diagnostic – signal strength test and try replacing the battery
RADIO TAMPER xx	Tamper fault on radio input number 'xx'	Check the tamper switch on mentioned radio input, check that the case is closed properly.
RADIO TAMPER xx	Tamper fault on radio bell number 'xx'	Check the tamper switch on the mentioned radio bell
RADIO JAMMING 700	Jamming fault on wireless ZEM	Check no radio interference is in close proximity to the radio devices/panel.
RADIO POLL F700	No 'polls' are received for 20 minutes before the set operation	Test the signal strength / battery on each wireless device

APPENDIX B: USER / ENGINEER OPERATIONS

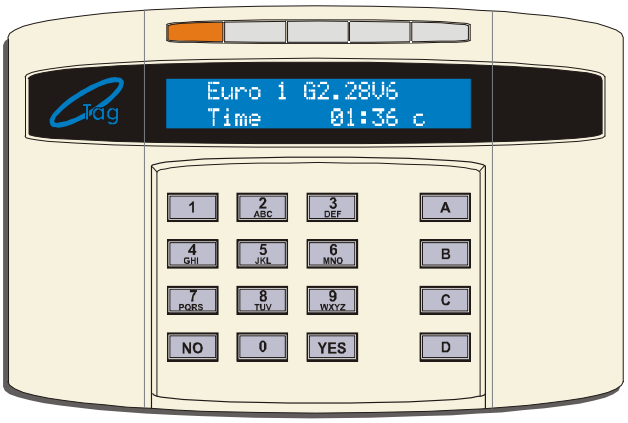
Anti Code / Engineer Reset

The system can be programmed so that it can be only fully reset by an engineer or by an anti-code reset (ask your engineer to program this feature).

Engineer Reset

After an alarm activation (this example shows a personal attack), enter your user code, the alarm will silence and the display will show the alarm that has just been activated.

The display will switch between the activation that has just occurred and 'Restore Required'. Press the [YES] key. The following display will be displayed:



The power LED will flash indicating that a restore is required. Enter your engineering code. "All Faults Have Cleared" will be displayed. Press the [NO] key twice, 'Enter Code' will be displayed. Press the [NO] key to return to day mode.

Anti Code

After an alarm activation (this example shows a personal attack), enter your user code, the alarm will silence and the following will be displayed:

The restore number that is shown (for example G19746), will need to be given to your alarm receiving station, in return they will supply you with a reset code.

- Press the [YES] key.
- Enter the code the ARC has given you. 'Engineer Reset Performed' will be displayed.

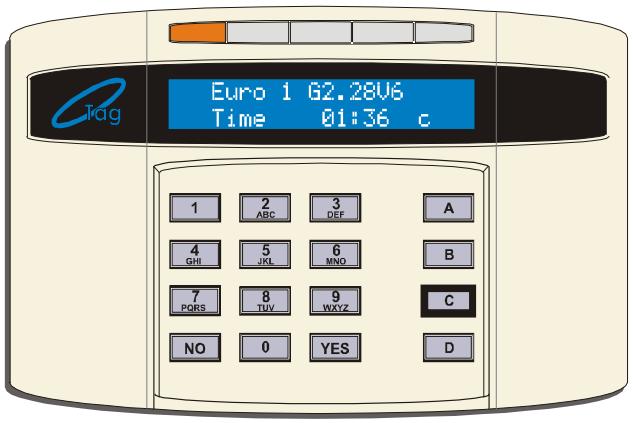
'Enter Your Code' will be displayed, either enter your user code to set/unset the panel, or press the [NO] key to reset to day mode.

Chime Function

The chime can be used for any input on the system; however the chime will only be active if the chime attribute is selected for the input in the Engineer Menu.

The [C] key can be used to select the Chime function while the system is unset. If enabled, a tone will sound every time the relevant inputs are opened.

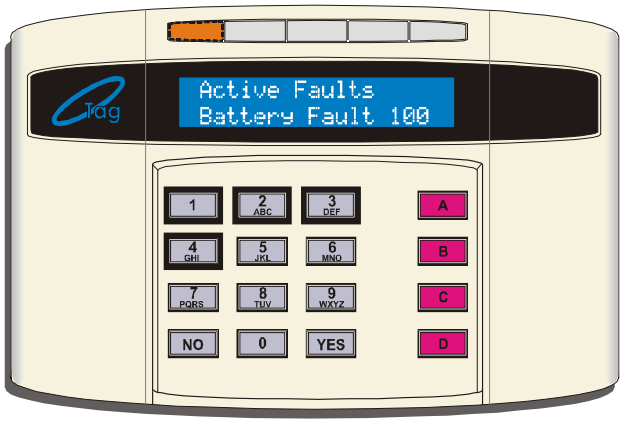
When enabled the display will show a 'c' on the right hand side of the keypad as shown below.



Omitting Inputs

If an input has been programmed as 'omittable' by your installer, you can leave an input inactive whilst arming the rest of the inputs on the system.

1. Enter your user code (default: 1234) or present your card/tag:



2. Before you can arm the system, any active faults will be displayed (see above). These should be cleared before you arm the system. Press the [NO] key.

3. Select the partition(s) / Arm Mode you would like to arm using the numeric and the [A] [B] [C] [D] keys. Press the [YES] key.

4. Once the exit timer has started, Press the [YES] key, 'Omit Inputs' will be displayed

5. Enter the inputs you wish to omit, for example, to omit inputs 2 and 3, enter '002' and press the [YES] key, then enter '003' and press the [YES] key. These inputs will be displayed on the bottom line of the keypad.

6. Wait 10 seconds, the display will then revert back to the exit time and once the system is set the selected inputs will be omitted for the system.

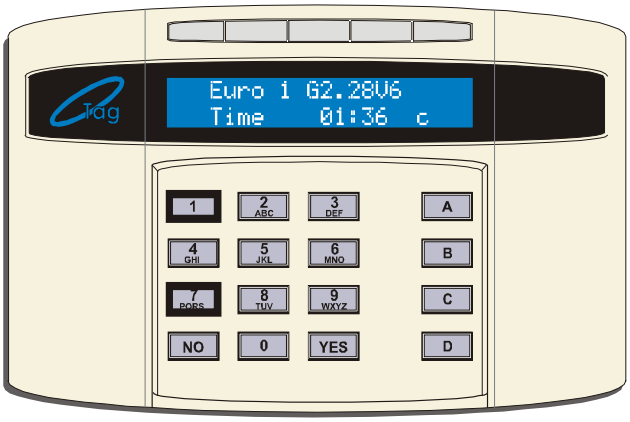
7. When you unset the system, the display will show the inputs that have just been omitted. Press the [YES] key.

Note when you unset the system the inputs will become active again.

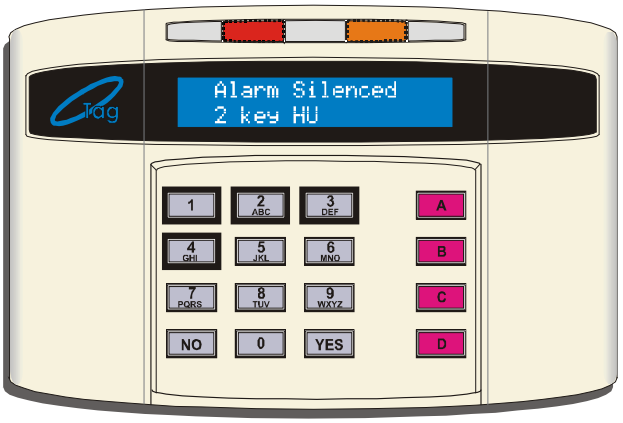
Hold up Alarm

The EURO keypad can be used to produce a Hold Up alarm if enabled by the engineer. If this is enabled, you can produce a Hold Up Alarm as follows:

1. Press the [1] and [7] keys at the same time:



2. An alarm will be activated. To unset the Hold Up alarm, enter your user code (default: 1234) or present a card/tag. The following will be displayed:



3. Press the [NO] key to reset the display.

PLEASE NOTE: If engineer restores or anti code restores are enabled you will not be able to reset the system until a valid engineer code or anti-code has been entered.

APPENDIX C: MASTER MANAGER MENU

Set Date & Time

Setting the date and time of the EURO system is vitally important as then any false alarms or unknown activations etc can be easily recognised in the event log, which records the date and time of each event.

1. Use the [B] and [NO] keys to scroll to **'SET DATE & TIME'**. Press the [YES] key.
2. ***Year:*** Enter the year, for example, for the year 2006, enter '06' on the keypad and press the [YES] key.
3. ***Month:*** Enter the month, for example, for June enter '06' and press the [YES] key***.***
4. ***Day:*** Enter the date, for example, for the 2nd, enter '02' and press the [YES] key.
5. ***Hours:*** Enter the hour, for example, for 8pm enter '20' (24 hour clock) and press the [YES] key.
6. ***Minutes:*** Enter the minutes, for example, for 8.30pm, enter '30' and press the [YES] key.

You will be returned to the Manager Menu.

Omit Inputs

Omitting inputs can be performed in the user menu, and works in a similar way as shown on page: 141.

Change Codes

Changing User Codes and Manager Codes

The Change Codes function allows you to assign or change codes or cards/tags for different users, as well as altering their options. The default code for user 1 is 1234.

1. Use the [B] and [NO] keys to scroll to **'CHANGE CODES**. Press the [YES] key.
2. 'Add New User' will be displayed - Press the [YES] key to add a new user. Press the [NO] key to change/delete a user.
3. When the display shows 'Empty', press the [YES] key and enter a PIN code, present a tag or press a button on the keyfob.
4. ***User Type***: Select the user type for this user code or card/tag:
   - Enter '0' = User Code (can access limited function in the manager menu)
   - Enter '1' = Manager Code (can access all functions in the manager menu)
   - Press the [YES] key.
5. ***User Partitions:*** Select the partitions that this user code or card/tag will be assigned for.
6. ***If a keyfob is learnt, the following options will be displayed. These can be programmed for each button:***
   i. *No Action*
   ii. *Show status*
   iii. *Set Area*
   iv. *Unset Any Area*
   v. *Latch Output*
   vi. *Timed Output*

7. ***User Set Options:*** Select the set option that this user code or card/tag will be used for.
   - Enter '0' = unset/set
   - Enter '1' = unset Only
   - Enter '2' = set Only
   - Enter '3' = None (You may just want the code to access the manager menu only)
   - Press the [YES] key.
8. ***Flexi-Set:*** If this option is selected as 'Yes' – then you can select which partitions you would like to set from the keypad. If this option is selected as 'No' (useful for cards/tags) then the system will automatically set the partitions that user has been assigned for.
   - Enter '0' = No
   - Enter '1' = Yes
   - Press the [YES] key.

NOTE: If a Access Control/Ward system is installed then you will get "Wards/Access" on the screen, here you can enter what codes/tags you can have linked with the access system, all you need to do is enter the device number (address) and press [YES]. You may have more than one.

9. ***User Name:*** Enter the user name

Review Logs

The Panel Log

The panel log includes all set events, unset events, alarm events and system faults. It also includes Engineer Access details.

1. Use the [B] and [NO] keys to scroll to **'REVIEW LOGS'**. Press the [YES] key. 'Panel log' will be displayed.
2. Press the [YES] key. The latest event will be displayed; more information can be attained by pressing the [C] key. For example, if the log says 'Alarm Silenced' then press the [C] key to see which user silenced the alarm as shown below:
3. Press the [A] key to return back to the main screen of the log. Use the [B] and [D] keys to scroll through the log. Once completed, press the [NO] key, 'Panel Log' will be displayed, press the [NO] key twice to exit the manager menu.

The Access Log

The Access log contains all Access Control and Guard Tour events.

1. Use the [B] and [NO] keys to scroll to **'REVIEW LOGS'**. Press the [YES] key. The following will be displayed:
2. Press the [YES] key. The latest event will be displayed; more information can be attained by pressing the [C] key. Press the [A] key to return back to the main screen of the log. Use the [B] and [D] keys to scroll through the log. Once completed, press the [NO] key twice to return to the manager menu.

Phonebook

This function allows you to change the SMS telephone numbers that are programmed for the text messaging service. The numbers will usually be programmed by your engineer. Here you will be able to alter each of the numbers.

NOTE: The SMS facility must first be programmed by your engineer

1. Use the [B] and [NO] keys to scroll to **'PHONEBOOK'**. Press the [YES] key.
2. Select which SMS number you would like to view (telephone numbers 1 to 4) and press the [YES] key.

   If you would like to change this number, you can use the [B] and [D] keys to go backwards and forwards through the number, to delete a number press the [C] key. Once the number has been deleted and/or you have entered a new number, press the [YES] key. Press the [NO] key to return to the manager menu.

Walk Test

The walk test enables you to check that all the detectors are working properly.

1. Use the [B] and [NO] keys to scroll to **'WALK TEST'**. Press the [YES] key. The following will be displayed:

2. Enter the partitions you would like to test using the numeric and [A] [B] [C] [D] keys then press the [YES] key.
3. The inputs to be tested will scroll on the bottom line of the display.
4. Walk around the premises, ensuring that you pass each detector to be tested on the relevant partition(s). As each detector is activated, a chime will be played and the input will be removed from the scrolling list. Once all detectors have been activated, the display will show 'Walk Test Completed'. Press the [YES] key to complete the test, you will be returned to the manager menu.

Bell Test

This function tests the Bell and Strobe outputs connected onto the system.

1. Use the [B] and [NO] keys to scroll to **'BELL TEST'**. Press the [YES] key.
2. The bell and strobe will activate if the bell is installed correctly. Press the [NO] key to return to the manager menu.

Start CHC SMS Update

If the engineer has set up SMS text messaging then this function needs to be used.

The system will automatically carry out a test call to the CHC (Castle Host Computer) every two weeks. The call is made via a premium rate number and the bill payer should be informed of the charge (50p per call). Customers who have "BT Answer 1571" enabled may have difficulty in connecting to the CHC.

1. Use the [B] and [NO] keys to scroll to **'START CHC SMS Update'**. Press the [YES] key.
2. The panel will communicate with the CHC, which will initialise the system as required. When this is complete the display with show either:

The panel is now able to send SMS Texts

OR

The test call has failed, please contact your engineer.

3. Press the [YES] key and you will be returned to the Manager Menu.

Dial Out Menu

This function allows you to choose which PC you wish to connect to via the phone line. This is used in conjunction with the EURO Insite software (Please contact Castle Care-Tech regarding this).

1. Use the [B] and [NO] keys to scroll to **'DIAL OUT MENU**. Press the [YES] key.
2. Choose which PC you would like to dial: 1-4. (these are modem number that the engineer would have programmed in – for example PC1 might be the PC at your home, PC2 might be the PC of the engineers etc). Press the [YES] key.
3. Select the operation you would like to perform:
   - Enter '0' = Connect to PC
   - Enter '1' = Test Call
   - Enter '2' = ARM Service
   - Enter '3' = Data From PC
   - Enter '4' = Data To PC
   - Enter '5' = Diagnostics (Sends electrical and diagnostic data to your PC)
   - Enter '6' = Commissioning. Press the [YES] key.
4. 'Calling Remote PC' will then be displayed. If the call fails, then please check your telephone connections and modem numbers.
5. Press the [NO] key to return back to the Manager Menu.

Allow Engineer Menu

If this function is enabled, the engineer will require authorisation from the user to access the Engineers menu.

1. Use the [B] and [NO] keys to scroll to **'ALLOW ENGR MENU'**. Press the [YES] key.
2. Select the following:
   - Enter '0' = No – To disallow engineer access (only accessible from the manager mode)
   - Enter '1' = Yes – To allow engineer access
3. Press the [YES] key, you will be returned to the engineer menu.

Block Remote Set

Your alarm may be configured so that your alarm installation company or company manager can set or unset the system remotely via the PC. Should you wish to block this access, select 'Yes' for this function.

1. Use the [B] and [NO] keys to scroll to **'BLOCK REMOTE SET'**. Press the [YES] key.
2. Select the following:
   - Enter '0' = No – To block remote arming
   - Enter '1' = Yes – To allow remote arming
3. Press the [YES] key, you will be returned to the engineer menu.

Block UDL

If this function is enabled, connecting to the EURO system via the PC software (upload/download software) will be only allowed in the Engineers Mode.

1. Use the [B] and [NO] keys to scroll to **'BLOCK UDL'**. Press the [YES] key.
2. Select the following:
   - Enter '0' = No – To allow upload/download access
   - Enter '1' = Yes – To block upload/download access
3. Press the [YES] key, you will be returned to the engineer menu.

Enter Anti-Code

This function will tell you if there are any engineer / anti-code features turned on.

You must enter your anti-code / engineer code to fully reset the system.

Exit Manager Mode

Select this option to save any changes you have made, and return to unset mode.

CHAPTER 19: CONTACT INFORMATION

Castle Care-Tech Ltd
Secure House
Braithwell Way
Hellaby
Rotherham
South Yorkshire
S66 8QY

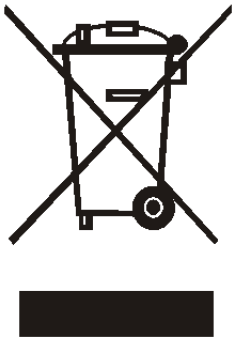
Telephone: +44(0)845 6434 999 (local rate)
Or telephone: +44(0)1709 535225

(For Alarm Engineers Only)

Opening Hours:
8:00am – 6.30pm
Monday to Friday

E-mail: support@castle-caretech.com

Website: www.castle-caretech.com



The symbol shown here and on the product, means that the product is classed as Electrical or Electronic Equipment and should not be disposed of with other household or commercial waste at the end of its working life. The Waste Electrical and Electronic Equipment (WEEE) Directive (2006/96/EC) has been put in place to recycle products using the best available recovery and recycling techniques to minimise the impact on the environment, treat any hazardous substances and avoid the increasing landfill.

nqa. ISO 9001 Registered UKAS QUALITY MANAGEMENT 015

bsia british security industry association

Castle Care Tech Ltd. reserves the right to adjust specifications of this system, at any time and without notice, in the interests of product improvement.

Castle Care Tech Ltd. is an independent British company specialising in the design and manufacture of high-quality security control equipment.

No	Input Type	Input Levels/Areas													Descriptions
		A	B	C	D	0	1	2	3	4	5	6	7	8	9	
1																
2																
3																
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No	Input Type	Input Levels/Areas														Descriptions
		A	B	C	D	0	1	2	3	4	5	6	7	8	9	
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No	Input Type	Input Levels/Areas														Descriptions
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No	Input Type	Input Levels/Areas														Descriptions
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No	Input Type	Input Levels/Areas														Descriptions
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278																
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280																

Input Types

00	Unused
01	Fire
02	Gas
03	HU
04	Silent HU
05	Tamper
06	Intruder
07	Final Exit (FX)
08	Entry Route (ER)
09	ER (Part FX)
10	FX (Part ER)
11	PTS
12	Switcher
13	Day Alarm*
15	Ward Control*
16	Fault
17	Closure Supervision
18	Shunt Input*
19	Unset Input*
20	Keyswitch Latched
21	Entry Shock Input
22	Input Line Fail
23	Keyswitch Pulsed
29	Interior
32	Flood
39	CCTV
40	Perimeter
41	Keybox
42	Medical
43	Final Exit 2

INPUT ATTRIBUTES										
No	**Chime**	**Omit**	**Double Knock**	**Dual Trip**	**Norm. Open**	**Walk Test**	**Monitor Activity**	**Special Log**	**Paired With**	**Confirm Group**
1										
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3										
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INPUT ATTRIBUTES										
No	**Chime**	**Omit**	**Double Knock**	**Dual Trip**	**Norm. Open**	**Walk Test**	**Monitor Activity**	**Special Log**	**Paired With**	**Confirm Group**
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INPUT ATTRIBUTES										
No	**Chime**	**Omit**	**Double Knock**	**Dual Trip**	**Norm. Open**	**Walk Test**	**Monitor Activity**	**Special Log**	**Paired With**	**Confirm Group**
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INPUT ATTRIBUTES										
No	Chime	Omit	Double Knock	Dual Trip	Norm. Open	Walk Test	Monitor Activity	Special Log	Paired With	Confirm Group
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INPUT ATTRIBUTES										
No	**Chime**	**Omit**	**Double Knock**	**Dual Trip**	**Norm. Open**	**Walk Test**	**Monitor Activity**	**Special Log**	**Paired With**	**Confirm Group**
269										
270										
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ASSIGN KEYPADS/READERS							
Address	***Set Point Type***	***Reader Type***	***Set Point Sets***	***Set Point Unset***	***Set Point In***	***Set Point Name***	***Location***
00							
01							
02							
03							
04							
05							
06							
07							
08							
09							
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29							

Set Point Types: *Keypad = 0. Reader = 1*

Reader Types: *Set Point = 0, Ward Control = 1, Not Used = 2, Access Control = 3, Entry Control = 4.*

SYSTEM DISPLAYS			
Area A Text		**Area 7 Text**	
Area B Text		**Area 8 Text**	
Area C Text		**Area 9 Text**	
Area D Text		**Full Area Text**	
Area 0 Text		**Sign on Message**	
Area 1 Text		**Site Name**	
Area 2 Text		**Display When Set**	
Area 3 Text		**Display Alarms**	
Area 4 Text		**Display HUs**	
Area 5 Text		**Display Inputs**	
Area 6 Text			

CHANGE TIMERS																
	Range	*Default*	*Programme*													
			A	*B*	*C*	*D*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
Entry Time	0-255 secs	30														
Entry Time 2	0-255 secs	30														
Exit Time	5-255 secs	30														
Siren Time	1-20 mins	15														
Confirm Time	0-99 mins	30														
HU Confirm Time	8-20 hours	8														
Siren Delay	0-20 mins	0														
Strobe Time	0-99 mins	0														
Re-arm Number	0-9	3														
AC Signal Delay	0-250 mins	40														
Speaker Time	0-250 mins	0														
Settle	0-255 seconds	5														
Double Knock	0-75 secs	10														
Pre-alarm	0-255 secs	30														
Line Fault	0-250 secs	20														
Set Fail	0-255 secs	40														
Guard Code Alarm	0-10 mins	3														
Fire Siren	1-99 mins	99														
Set Fail Warning	0-99 secs	0														
Input NAT Days	0-14	14														
Input NAT hours	00-23	0														
W/L Supervision	1-99 hrs	2														
W/L Jamming	0-100 secs	100														
Service Time	367	0														

EXIT MODES				
Area/Level	*Door/Timed*	*Push to Set*	*Timed*	*Final Door*
A				
B				
C				
D				
0				
1				
2				
3				
4				
5				
6				
7				
8				
9				

VOLUME CONTROL																
	Default	*A*	*B*	*C*	*D*	*0*	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*
Entry Tones	4															
Exit Tones	4															
Alarm Tones	7															
Fire Alarm	7															
Tamper Tone	6															
Day Alarm	6															
Chime Tone	3															
Intelligent Set	3															
Code Stops Sound	Yes															
E/E Keypads Only	No															
Alert Keypads Only	Yes															
Silent Technical Alert	No															

ALARM RESPONSES		
Alarm Response Options	***Default***	
Silent 1st alarm	Never	
Disable confirm on entry	No	
Inputs confirm after entry	1	

Area	*Starts At*	*Stops At*	*Starts At*	*If Areas Set*	*Start at*	*If Areas Set*
A						
B						
C						
D						
0						
1						
2						
3						
4						
5						
6						
7						
8						
9						
Fire						
Gas						
Hold Up						
Day Alarm						

INTELLIGENT SET	
Intelligent set input numbers	

CHANGE CODES	
5 digit pins	

ENGINEER TESTS	
Soak Control	

SITE OPTIONS		
Site Options	***Default***	
Set With Fault	Yes	
Set with Tamper+	No	
Set with ATS Fault	Yes	
Set with T Fault	Yes	
Set Fail = Alarm	No	
Do Battery Load Test	No	
Ward Misoperation	No	
Strobe/Squawk at Set	No	
Re-Arm Omits	No	
Use Level Set	No	
Confirmed When	Final Set	
Autoset Force	No	
Restrict PIN use	No	
Simple Set	No	
Invert ATE Outputs	Yes	
Common Lobby	Yes	
Flexi Unset	No	
2 Key Hold Up	None	
ATE inputs	None	
Tag Opens Doors	No	
Set with Polling Fault	No	
Fob Unset Entry	No	
Wireless Supervision Fault	Yes	
Download If Set	No	

ENGINEER RESTORE OPTIONS		
Engineer Restore Options	***Default***	
Intruder	No	
Hold Up	No	
Tamper	Yes (grade 3). No (grade 2)	
Soak	No	
Confirmation	No	
Faults	No	
Anti code Reset	No	

MASTER MANAGER MENU		
Master Manager Options	***Default***	
Allow Engineer Menu	Yes	
Block Remote Arm	No	
Block UDL	No	

CHANGE OUTPUTS			
End station		**ZEM Address 0**	
Output 1		Output 1	
Output 2		Output 2	
Output 3		Output 3	
Output 4		Output 4	
Keypad/Reader 0		**ZEM Address 1**	
Output 1		Output 1	
Keypad/Reader 1		Output 2	
Output 1		Output 3	
Keypad/Reader 2		Output 4	
Output 1		**ZEM Address 2**	
Keypad/Reader 3		Output 1	
Output 1		Output 2	
Keypad/Reader 4		Output 3	
Output 1		Output 4	
Keypad/Reader 5		**ZEM Address 3**	
Output 1		Output 1	
Keypad/Reader 6		Output 2	
Output 1		Output 3	
Keypad/Reader 7		Output 4	
Output 1		**ZEM Address 4**	
Keypad/Reader 8		Output 1	
Output 1		Output 2	
Keypad/Reader 9		Output 3	
Output 1		Output 4	
Output Address 0		**Output Address 1**	
Output 1		Output 1	
Output 2		Output 2	
Output 3		Output 3	
Output 4		Output 4	
Output 5		Output 5	
Output 6		Output 6	
Output 7		Output 7	
Output 8		Output 8	
Output 9		Output 9	
Output 10		Output 10	
Output 11		Output 11	
Output 12		Output 12	
Output 13		Output 13	
Output 14		Output 14	
Output 15		Output 15	
Output 16		Output 16	

STU/ATE Outputs		
1.	**2.**	**3.**
4.	**5.**	**6.**
7.	**8.**	**9.**
10.		

SET UP DIGI/SMS				
	ARC Details 1	**ARC Details 2**	**ARC Details 3**	**ARC Details 4**
Digi Channel/Content				
1st ARC number				
2nd ARC number				
ARC Account				
Mobile Number				
1				
2				
3				
4				
5				
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22				
23				
24				
25				
26				
27				
28				
29				
30				
31				
32				

For SMS/SIA Calls, just tick content types 1-32. For fast format digi calls to ARC, fill in which output type is signalled in each channel 1-16

SITE:
ENGINEER:
TELEPHONE NUMBER:
REFERENCE:
DATE:

Note: Not all features are available on all products across the range.

EURO panels are suitable for use in Grade 2 installations; EURO (and EURO fitted with MSX card) control panels are suitable for use in Grade 3 installations. All MSX cards upgrade software for suitability to Grade 3 installations.

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QUICK FIND GUIDE

COMMUNICATION

Function	Description	Pages
SET UP DIGI/SMS?	Programming of telephone numbers, digi channels and SMS details.	Page: 67
ENGINEER RESTORE OPTIONS?	Anti code and Engineer resets after alarms	Page: 56
SET UP DOWNLOADING?	Makes the system available for upload/download via a modem or RS232 lead.	Page: 65
DIAL OUT MENU?	Makes the system dial to a PC.	Page: 74
ALARM RESPONSE?	Disable Confirm on Entry, Inputs to Confirm	Page: 46
SITE OPTIONS?	ATE Inputs	Page: 54

ENGINEER TEST FUNCTIONS

Function	Description	Pages
ENGINEER TESTS?	Walk Test, Output test, CHC Communications Test	Page: 58
DIAGNOSTICS?	Readings of the PSU, Input Resistances, etc.	Page: 61

ADDRESSING/CONNECTING DEVICES

Function	Description	Pages
ASSIGN KEYPADS/READERS?	Address Keypads, Readers, Access Control	Page: 33
INSTALL ZEMs?	Address Remote Input Expanders	Page: 22
CHANGE OUTPUTS?	Address Remote Output Expanders	Page: 47
WIRING DIAGRAMS	Wiring connections for all EURO components	Page: 100

PROGRAMMING OPTIONS

Function	Description	Pages
CHANGE INPUTS?	Programs input types, attributes etc	Page: 22
CHANGE OUTPUTS?	Programs output types	Page: 47
CHANGE TIMERS?	Programs siren time, confirm time, entry/exit time, siren delay etc.	Page: 38
CHANGE CODES?	Programs Duress, Manager & Engineer codes. For user please see the user manual.	Page: 42
RADIO EXPANDER	Addressing the radio expander, assigning and deleting detectors.	Page: 94

TABLES

Function	Description	Pages
FAULT CODES	Fault descriptions	Page: 136
INPUT TYPES	Table of all the input types available	Page: 26
OUTPUT TYPES	Table of all the output types available	Page: 48
MASTER MANAGER MENU	Details of the master manager functions	Page: 140